

***Irrigationism* – the politics and ideology of irrigation
development in the Nam Songkhram Basin, Northeast
Thailand**

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ABSTRACT

The principal drivers of modern irrigation development in tropical Asia are widely understood to be political economy related factors such as demographics, changing diets, international food prices, globalization, urbanization, national food and energy policies, and increasingly, climate change. Such standard drivers of change tend to dominate mainstream water resources development discourse, embedded in instrumental and functional modes of thought and practice. Contrary to the dominant tendency in professional irrigation literature to rely on engineering or managerialist paradigms to conceptualize the field of water resources development, this thesis takes as its starting point an inherent recognition of the political and ideological nature of irrigation development, seen as an organizational tool for state control of people, society and water. This study is concerned with understanding the exercise of power and authority in societal irrigation development, through the analysis of a complex, cross-scalar, multi-actor case study in the context of Thailand, conceived of as an exemplar of a modern hydraulic society.

Examining a single river basin case study (the Nam Songkhram) in Thailand's marginal Northeast and based on a mixed methods, inter-disciplinary approach, the empirical evidence suggests that a number of powerful actor groups in society, including hydraulic bureaucracies, the military, the private sector, national politicians and the monarchy, form alliances or "strategic groups" that compete to control the process of irrigation development at multiple scales and draw upon a range of material practices and discursive processes to further their individual and collective interests. The research contends that irrigation development is justified by socially constructed narrative framings located within the cultural and historical milieu of Thailand, understood to form part of a resilient and rather static nationalist-linked ideology (termed *irrigationalism*), employed in the reproduction and outward expansion of state power from the Bangkok-centric core to the periphery.

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Chapter 1 Introduction

1.1 Introduction

Historically, it has frequently been recognized that irrigation development has not only created a strong bond between humans and river basins that dates back to the sixth millennium BC, but irrigation has also had a propensity to unleash profound transformations in human societies. This power to transform has created the necessary conditions from which some civilizations have “sprung and blossomed”, or conversely, been instrumental in the subsequent wither and collapse of those same societies as a result of inherent vulnerabilities resulting from the mis-application of this technological intervention (Postel, 1999). The simple notion that water has been critical to the “making of human history” and has exerted a certain degree of control over societal evolution claims ancient precedents¹ (Worster, 1992). Hydraulic engineering works for irrigation and flood control purposes can be traced back to some of the earliest great civilizations, moulding the fabric of their respective social structures to create “hydraulic cultures” in the Near, Middle and Far East (Newson, 1997). At the same time, it has been suggested that water possesses a dualistic nature, “as life-giving material substance and as the wellspring of form, on which are founded the most basic myths and cultural manifestations” (Illich, 1986).

Control over flows of water in different global and historical contexts has consistently proved an effective means to consolidate power within and between social groups. Occasionally this may have been brought about by external necessity and was unforeseen, but in far more cases, “the concentration of power within human society that comes from controlling water was a deliberate goal of ambitious individuals, one they pursued even in the face of protest and resistance” (Worster, 1992:20). During more recent history, water resources development has been recognized as an intentional political strategy for controlling space, water and people,

¹ Worster (1992) points to the example of an eighteenth century BC map of the Middle East that shows the River Euphrates dividing the lands of the earth into two separate islands and surrounded by a huge circling sea, Oceanus, seen as both the source and the destination of the Euphrates.

as well as “an important part of everyday forms of state formation” (Molle et al., 2009d). Irrigation, perhaps to a greater extent than flood defence and other protective hydraulic technologies, is a form of water control that has a tendency to lead to communal reorganization, novel patterns of human interaction, and new modes of discipline and authority. Societal relations to water as a universal and essential resource, while “empirically fascinating and theoretically challenging” (Tvedt and Jacobsson, 2006), are often under-researched and poorly understood, especially in the socio-politically complex field of irrigation development which has long been dominated by a social engineering paradigm, claims Mollinga (2008).

Research dedicated to a critical enquiry about past and potential future paradigms of irrigation development in different worldwide contexts would seem particularly apposite at this juncture in history. Irrigated agriculture expansion and associated crop productivity increases are considered to have been an indispensable contributor to meeting fast-rising world food demand over the last half century, in addition to supporting rural economic development, stabilizing prices and reducing poverty (Rosegrant et al., 2002; World Bank, 2006). Across large parts of Asia, irrigation is often credited with bringing widespread food security improvements and banishing food crises or famines (Pingali et al., 1997), in addition to diminishing poverty levels and significantly contributing to socio-economic development (Hussain, 2007; Faures and Mukherji, 2009). Looking to the future, it has been predicted that rising population and income trends will continue to stimulate rapidly growing food demand and that irrigated agriculture will have to provide at least 60 % of the extra food needed over the next quarter of a century (Independent Evaluation Group, 2010). A recent influential report by the British government addressing the “The Future of Food and Farming”, suggests that agricultural water demand could increase by a further 30 % by 2030 and will require new investments in irrigation systems, although a note of caution is expressed over the dangers of untrammelled irrigation expansion (Foresight, 2011).

While some respected commentators believe that the era of rapid expansion of irrigated agriculture is essentially over (e.g. Molden, 2007), others have argued that there is a need for increased external investment in water institutions and large-scale infrastructure in developing countries to achieve economic growth and development (Shivakoti et al., 2005), especially in those poorer nations that are portrayed as

“hostages to hydrology”² (Grey and Sadoff, 2007). Such calls for further hydraulic infrastructure investment and construction, characterized by a quantitative “harnessing” approach to water resources development, tend to be dominated by instrumentalist and managerialist perspectives (Mollinga, 2007). Molle et al. (2009a) and Hoanh et al. (2009) noted a new rhetoric of justification for large-scale hydraulic development projects emerging amidst calls for renewed investment in irrigated agriculture following the 2008-09 “food crisis”. Despite the relative wealth of literature addressing historical cases of failed or collapsed hydraulic states, often induced by over-zealous and unsustainable harnessing of river flows for irrigation, relatively little research has been conducted around contemporary developing world cases. This thesis is a partial attempt to redress this imbalance by trying to understand the underlying political and societal drivers of irrigation development and discourses employed by different groups in contestation over water control, through consideration of a single case in Southeast Asia.

1.2 Contested paradigms and drivers of irrigation development

A common characteristic of the global and regional literature relating to explanatory factors for irrigation development pathways has been a tendency towards making macro-analytical claims of generalizability at the global or continental levels, but often overlooking the context-specificity of local and nationally situated accounts of underlying processes and “drivers” behind water resources development. Mollinga (2007) documents the gradual shift in water resources development discourses from supply enhancement approaches, with agricultural growth and national food security being prime drivers, to more recent instrumentalist approaches focused on irrigation management reform programmes and “getting the institutions right”. It would appear that there has been an inordinate amount of effort devoted to the task of getting irrigation development “right”, both technically and socially³, even in the face of

² Countries that remain “hostage to hydrology” are typified as those with high inter- and intra-annual rainfall and a “difficult” hydrology supposedly contributing to their poverty, according to Grey and Sadoff (2007).

³ Getting the “right irrigation” refers to comments made by President Barak Obama at the G8 Conference held in Italy in July 2009, in which he talked about introducing “the right irrigation” to assist farmers in Africa to increase agricultural productivity and achieve food self-sufficiency, without

repeated monumental application failures documented across various spatio-temporal scales and contexts (Reisner, 1986; Kortenhorst et al., 1989; Moris and Thom, 1990; Adams, 1992; McCully, 1996; Postel, 1999). In the context of African development, Moris (1987) has argued that irrigation is a “privileged solution”, that is largely immune to critical scrutiny as a development strategy, because its value and relevance are taken to be self-evident. Yet, surprisingly little research to date (with a few notable exceptions), has been devoted to understanding causal explanations for certain societies’ dogged (often perverse) pursuit of strongly irrigation-oriented development pathways (i.e. understanding the underlying drivers of development) or conceptualizing the socio-political processes that accompany a privileging of this mode of development.

At the global level, Molle has elaborated eight main drivers providing explanation for why river basins may become “overbuilt”⁴, many of which relate directly to irrigation development and draw attention to the artificial nature of water scarcity and how project planning tends to gain “a life of its own, overriding criteria of hydrologic or economic relevance” (Molle, 2008b:217). “Ideology and state building” is identified as one category of explanatory mechanism by which water scarcity is engendered and resources overcommitted. By contrast, Faures and Mukherji (2009) identified nine rather different drivers of change in Asian irrigation nearly all of which relate to a broad political economy, with diversification of agriculture, changing diets and aspirations and climate change being perceived as the most important drivers in Southeast Asia. The possibility of national political, cultural and ideological factors being proximate drivers of irrigation development is hardly considered in such conventional or mainstream normative analyses.

The apparent paucity of research concerning national-level political and ideological drivers of irrigation development reinforces the relevance of current development debates around notions of sustainability, in light of the observation that societies which dogmatically pursue an irrigation-based paradigm at the expense of environmental sustainability or adaptability, tend to eventually collapse or fail (Newson, 1997; Postel, 1999). The documented historical fate of many irrigation-

elaborating the technology he had in mind, but gave an opportunity to open up a discussion on this contentious topic by Lankford (2009).

⁴ An “overbuilt” basin implies one where the development of infrastructural resources tends to outstrip available resources, leading to a situation of manmade water scarcity for some resource users.

based societies becomes all the more prescient in the contemporary context when it is considered that more irrigation and general hydraulic development has occurred worldwide in the last half century than at any other period in human history (Tvedt and Jacobsson, 2006). Mollinga (2007) has drawn attention to the inclination for water professionals to remove the “political” dimensions from water resources management discourse, a phenomenon that has often extended to academic researchers of irrigation who treat it as an apolitical technological intervention. Instead, Mollinga calls for the adoption of a “political sociology of water resources management” that recognizes the notion “that *water control* is at the heart of water resources management and should be conceived as a *politically contested resource use*” (Mollinga, 2008:10, emphasis in original).

Critical perspectives incorporating theoretical and empirical dimensions of differential societal power relations and control of water resources through technological intervention have been the subject of study by a relatively small number of Asian history and politics scholars. Amongst the most influential studies has been that of Karl Wittfogel (1957), whose theory of powerful agro-managerial, state dominated “hydraulic societies” originating in certain arid and semi-arid regions of the world strongly influenced wider theories of state formation. Wittfogel developed an alternative meta-theory of history that placed nature at the centre of a broad framework of development-orientated, historical materialism (Tvedt and Jacobsson, 2006). Wittfogel’s hydraulic society theory has over the decades since its publication been the subject of much debate, especially in the field of social anthropology (e.g. Mitchell, 1973; Peet, 1985; Davies, 2009), and has occasionally been rejected out of hand on the basis that it is overly “deterministic”, “empirically untenable” and cast as theoretically “deeply flawed” (Robbins, 2004:48). Despite the criticisms, the hypothesis still continues to hold explanatory relevance for some researchers of water and society relations, but in a wider variety of political contexts than originally envisaged by Wittfogel, (including the United States), and most recently adapted to theorize the formation of a modern hydraulic society in the Vietnamese Mekong Delta (Evers and Benedikter, 2009b). Perhaps now would be a good opportunity to re-appraise the conceptual relevance of hydraulic society theory applied to a modern national context in mainland Southeast Asia, a region only ever superficially studied by Wittfogel it seems, as it lay outside of the agro-climatic zone

he considered primarily gave rise to hydraulic societies. Given the remarkable persistence of an irrigation development imperative and an apparently static discourse, this task becomes all the more relevant as the Thai state seeks to materialize latent plans for water abstraction from the transboundary Mekong river to irrigate vast swathes of the Northeast, as part of an ongoing hydraulic mission.

1.3 Ideology and politics – going beyond material drivers of irrigation development

The provision of water to society through technological means, for example via the fountains of ancient Greek cities or early historical irrigation systems, have been said to represent “an ideological and cultural notion of the triumph of civilization over nature” (Tvedt and Jacobsson, 2006:ix); in other words, water portrayed as both life giver and taker appears as if it were fully under the control of humans. Such technological beliefs symbolize the material fact that no society or nation has been able to exist or develop without subjugating water in various forms to the demands of that society, maintains Tvedt and Jacobsson (2006). As such, the struggle to control water is viewed as an endless task for powerful groups, aware of the social organizational properties of physical water control, who may call on the adoption of ideological means to achieve the desired ends.

Different perspectives surrounding the social processes of water resources development and ultimately, societal control of water for irrigation purposes, already briefly alluded to, raise pertinent questions about the degree to which irrigation systems⁵ should be conceived of as merely agricultural intensification technologies, incorporating socio-economic and functional water usage elements, or whether they should be recognized more broadly as social objects, that embody more ideological and ideational elements. It has been noted that there has long been a concentration of effort and resources aimed towards understanding irrigation development as a technological process, and this paradigm still tends to dominate the mindsets, discourse and practices of the state agencies and organizations charged with

⁵ NB: I employ the term in the wider sense of agricultural water resources management, rather than in the more restricted sense of communal or state-managed irrigation systems alone

implementing irrigation development in many developing countries (Chambers, 1980; Coward, 1980a; Mollinga and Bolding, 2004). The political and ideological dimensions of control over water facilitated by irrigational development pathways, however, are rarely considered in mainstream water resources discourse for reasons that will become apparent in the literature review and subsequent chapters. There are however, some precedents for considering irrigation an ideological phenomenon, which are explored in more detail in Chapter 2.

1.4 Irrigation development in Thailand – so obviously a good thing?

Some authors have claimed that human-water relationships, and not human-land relationships, are determining in Southeast Asia (Stott, 1992). Further, it has been recognized that water resources management discourses are fundamental to studies of Southeast Asian society and culture and represent a “linking theme” and “defining element” (Rigg, 1992). Thailand has been claimed to have a long history of unrivalled competency in irrigation management dating back to the thirteenth century (e.g. Ounvichit, 2005; Whaley, 2005) that has essentially continued unchecked to the present, with some domestic researchers claiming it as “the most advanced country in South-East Asia as far as water resource management is concerned” (Tuntawiroon and Samootsakorn, 1984:291). If water resources management prowess was measured in quantitative terms of hydraulic infrastructure constructed then these hubristic claims might hold some validity, as Thailand was recorded by the World Commission on Dams (WCD) as having 204 large dams, far ahead of Indonesia, the second most heavily dammed country in Southeast Asia with 96 dams (World Commission on Dams, 2000). It also ranks as the world’s largest rice exporter⁶, the sixth largest rice producing country in the world and a major exporter of a variety of other agricultural crops (Falvey, 2000), although much of

⁶ Thailand exported a reported 10 million tons (milled equivalent) of rice in 2008, constituting about a third of total global rice trade (Clayton, 2010). However, in 2012 Thailand slipped to the second ranking amongst rice exporting nations, with India ascending to the top slot (Source: <http://www.blackseagrains.net/about-ukragroconsult/news-bsg/india-is-worlds-biggest-rice-exporter-in-2012-fao> Accessed 28 December 2012)

this agricultural production is grown on non-irrigated lands, with only 21 % of cultivable land officially irrigated.

Beyond a curiously enduring image as essentially “an agriculture-based country” (e.g. The National Identity Board, 2000) with a close cultural affinity to water resources⁷, Thailand’s close historical association with rice cultivation has led a characterization as a “rice-based society” (Ishii, 1978; Yano, 1978). Internally, this popular perception has persisted over time, a position which appears to deliberately overlook the advanced socio-ecological transition processes of de-agrarianization that have been underway for many decades (Rigg, 2001, 2003; Rigg, 2005). As argued by Ganjanapan and Hirsch (2010:33), rural populations increasingly rely upon “capital-based production and labour markets with complex connections to the global market and regionalization of development”, more than land-based agricultural production. Indeed, Rigg and Nattapoolwat (2001) pointed out that few contemporary “farmers” in Thailand rely solely on agriculture to meet their livelihood needs. Based on 2011 data, the agricultural sector reportedly constituted just 12.2 % of the entire economy, against 45.3 % for industry and 42.5 % for the services sector, with agriculture’s share steadily declining over many years⁸ (Central Intelligence Agency, 2011).

Despite the on-going agrarian shift, the modern state of Thailand has placed much emphasis (both materially and discursively) on developing an extensive irrigation infrastructural coverage and capacity (Falvey, 2000; Molle, 2007a). Kaida (1978) noted that irrigation development imperatives have figured prominently in the regional development discourse for decades. Irrigation infrastructural development objectives have overwhelmingly been perceived as an end in itself, rather than a means to developmental progress by state actors (Brotsma, 1996). Indeed, the vast majority of the national budget allocated to the bureaucracies charged with hydraulic development, especially the Royal Irrigation Department, is devoted to infrastructural development (i.e. hardware-based solutions), rather than the operation, management and maintenance of the systems constructed or implementing

⁷ Based on contacts with people living along the banks and on raft houses floating on the Chao Phraya River, a British visitor to Siam in the early 19th century described the Siamese as “aquatic in their disposition” (Ishii, 1978).

⁸ According to Baker and Phongpaichit (2005), industry overtook agriculture’s contribution to GDP in 1984.

recommended sectoral reforms constituting the “software” components of water resources governance (Facon, 2002). Domestic state investment in expansion of irrigation infrastructure and water storage supply has continued unchecked during recent times, despite an internationally supported public rhetoric of institutional change towards a demand-side management paradigm and sectoral reform (Sethaputra et al., 2001), that has shown poor results in its application since the 1990s⁹ (Molle, 2007b). Nowhere in Thailand is irrigation development discourse a more integral part of state visions to solve perceived rural development dilemmas such as regional poverty and water scarcity, than in the socio-ecologically distinctive Northeast (Molle et al., 2009a). But even after sixty years of continual investment in irrigation expansion, state irrigation systems still only serve an estimated 10-12 % of the total agricultural land area in the Northeast (Nesbitt et al., 2004; Turral, 2008), lower than any other region in the country, which is interpreted by the government as a signal to focus more development effort there. Significantly, the region also contains roughly a third of the total national electorate.

The general model of irrigation development that has been applied in Northeast Thailand, still follows a strongly supply-driven, state-led and developmentalist paradigm skewed towards constructing outmoded rice-based system designs (Facon, 2005), which tends to challenge the assumptions made by some theoretical characterizations of a uni-linear and stagist historical evolution of irrigation systems in Asia (e.g. Barker and Molle, 2004). What is perhaps most remarkable in the case of Thailand is that nearly all main strategic groups (state and non-state) appear to support a continuation of an irrigation-based development paradigm, with issues of contestation mainly restricted to determining “the right irrigation” (cf. Lankford, 2009) in terms of technology, scale, institutions, policy, participation, etc. Fundamental questions about the benefits or wisdom of pursuing an irrigation development pathway itself are scarcely raised, despite the fundamental changes in Thai socio-economic structure alluded to earlier. This would seem to concur with Berkoff’s (2002) wry observation that “[I]rrigation is so obviously a *good thing* - who can be against it?”¹⁰, drawing attention to the internal political dynamics that

⁹ For example, the North-East Water Management and System Improvement Project (NEWMASIP) supported by the European Commission between 1991-98, devoted 90 % of total programme funding (US\$ 60 million) to hardware investments (Broksma, 1996).

¹⁰ NB: Emphasis in original quote

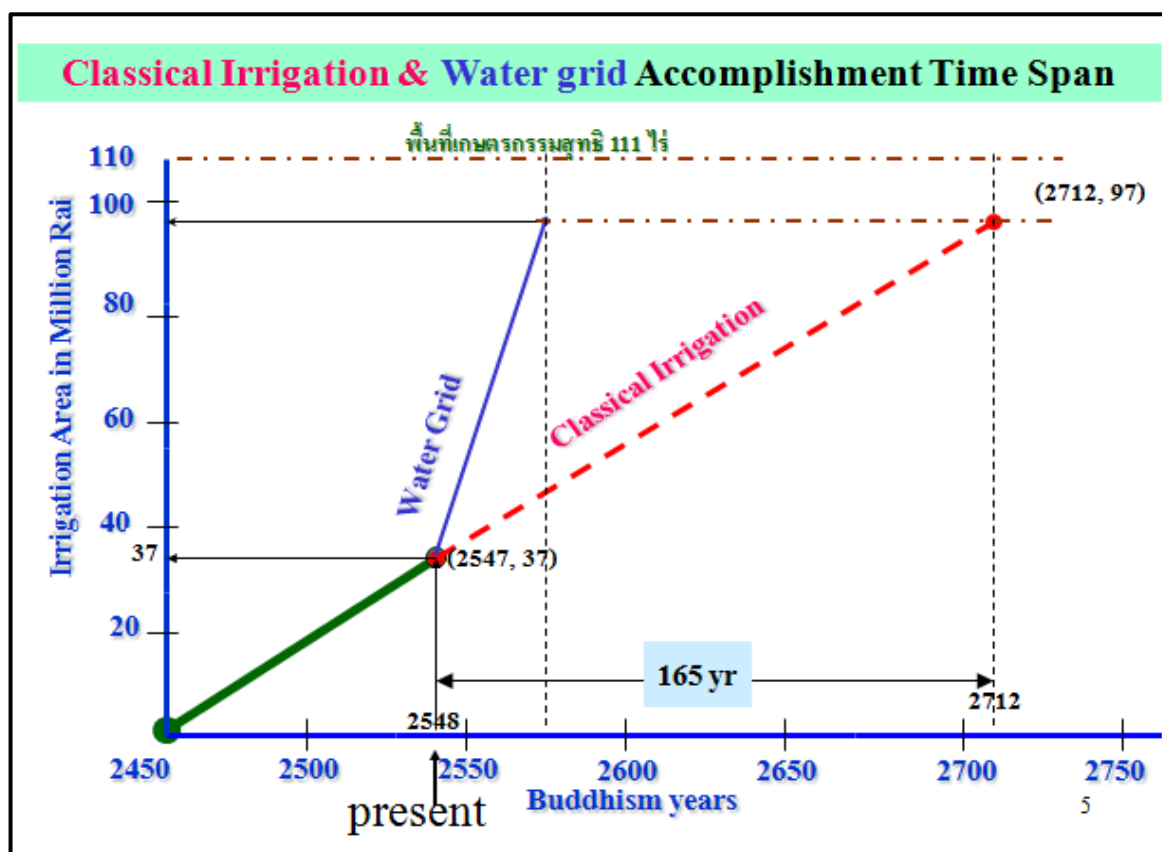
invariably favour public irrigation projects proceeding in developing country contexts. In such contexts, questions that address the fundamental power relations in society, the origins of development discourses and who benefits and loses from the existing status quo in water resources development are frequently obscured or simply overlooked in research.

Despite a growing awareness of multiple local struggles over water access, unresolved social conflicts, environmental issues and questionable economic performance of past hydraulic development (Hirsch, 1998; Sneddon, 2000; Sneddon, 2002), powerful elements within the Thai state still appear committed to radically expanding irrigation coverage in the Northeast region, reliant on a well rehearsed clutch of rhetorical justifications. Successive governments over the past three decades have vowed to “green” the Northeast and transform it into a rich and prosperous land (Sneddon, 2003b; Floch et al., 2007; Molle et al., 2009a), based on a utopian premise of providing almost universal irrigation system coverage. Figure 1.1 below illustrates one of the simplistic assumptions presented by the Thaksin Shinawatra government¹¹ to justify the implementation of a national “Water Grid Project”, that provides a sense of the sort of hubristic claims and visions that inform the development discourse. Ignoring past deficiencies and failures of irrigation development to meet targets, it implicitly assumed a fantastical future straight-line irrigation expansion paradigm; oblivious to any economic, social or environmental barriers, quite apart from political realities. This so-called “mega-project”, while deeply flawed in its conception (Molle and Floch, 2008a), was the latest incarnation in a string of pan-regional irrigation developmental projects that stretch back to the Tennessee Valley Authority-inspired Pa Mong “multi-purpose” Mekong diversion dam project conceived in the late 1950s (Molle et al., 2009b; Molle et al., 2009c). The basic meta-justifications employed for that project have been tirelessly revived and recycled in every Northeast irrigation “mega-project” since (Molle et al., 2009a). The Democrat-led coalition vowed in 2010 to extend irrigation coverage by another 176,000 ha nationwide to produce an extra 4.3 million tonnes of rice before 2012 under its so-called *Thai Khem Kaeng* (“Strong Thailand”)¹² economic stimulus

¹¹ This government under the populist *Thai Rak Thai* (Thai Love Thai) party banner was in power from 2001-2006, before being ousted by a military coup.

¹² This stimulus measure initiated by the ruling Democrat Party coalition was designed to direct funds for various public infrastructure projects, mostly through established departmental line agencies.

programme (Arunmas, 2010).



(Source: Presentation by Thai consultant for the Water Grid Project entitled “Water Grid: How & Why”, at the Research Development Institute (RDI), Khon Kaen University. 23 February, 2005. NB: Figure also shown on the front cover of Molle and Floch, 2007)

Fig. 1.1 Graph produced by the Department of Water Resources to justify the implementation of a proposed national “Water Grid Project”. It suggests that if the Water Grid Project option is adopted, then 88 % irrigation provision could be achieved nationally in just 27 years, against a projected 165 years period under the fanciful “Classical Irrigation” scenario (i.e. existing development approaches). NB: 2548 in “Buddhism years” equates to 2005 AD.

While a presently rather limited, but growing, body of critical research concerning irrigation development politics exists in the Mekong region, there has been a tendency to emphasize the socio-economic and ecological contexts in which large-scale, national and transboundary irrigation development is situated; while comparatively less attention has been paid to lower scalar levels of analysis and in particular, cross-scalar linkages between the micro and the macro levels. Some exceptions to the rule exist, but most studies have tended to privilege macro analysis

About 22.4 % of the entire budget was earmarked for water resources and agricultural development projects.

over more local contexts, and the interrogation of meta-justifications and national politics over the “politics of the everyday” at the local, community, system or field levels (Molle, 2005; Molle and Floch, 2008a; Molle et al., 2009a). Conversely, some irrigation management studies have placed strong emphasis on the micro or sub-basin level context, while placing less emphasis on the upstream hierarchical linkages (e.g. Bruns, 1991). Similarly scant attention has been paid to questions of national politics and power relations dynamics between key groups in society embedded in irrigation development paradigms. In an effort to address this perceived analytical gap, the present study seeks to extend an understanding of under-rated or “hidden” drivers of irrigation development in Northeast Thailand and thereby complement earlier scholarly contributions by field researchers such as Bruns (1991), Sneddon (2000; 2003b) and Molle and Floch (2008a), who have laid a solid foundation from which to build. In doing so, it attempts to address questions posed by Molle (2007b) concerning Thailand’s irrigation development pathways and the agency of hydraulic bureaucracies *vis à vis* that of individual actors; the question of beneficiaries of hydraulic development asked by Hudson-Rodd and Shaw (2003), “[w]ho benefits from the projects and who determines what projects are carried out in the name of ‘progress and development’?”; and more universally addressing the concerns of Mollinga (2008), regarding the paucity of studies explicitly making links between the local, national and (occasionally global) drivers and processes of irrigation development. Thus, addressing the underlying socio-political drivers of irrigation development in the context of Thailand, conceived as a modern exemplar of a hydraulic society, based on a grounded empirical case study, and linking these to questions of state control of water and unequal power relations is a primary objective of this research.

1.5 Contention and justification

This research contends that in the context of Thailand, irrigation development should not only be regarded as a socio-technical intervention in the process of agricultural intensification, but has additional distinctive political and ideological dimensions, found to be primarily embedded in the domestic political culture. It accepts the basic premise that ideology and politics are overarching drivers of water resource

development in Thailand and, “the way in which dominant players are able to cast their agenda largely determines outcome” (Molle et al., 2009a). An ideology of irrigation development, or “*irrigationalism*”, as I term it, is proposed as a key causal mechanism or driver that partly explains the persistence and resilient nature of a state-centric hydraulic development paradigm in the Northeast region during the last six decades or so, that appears to operate irrespective of trends towards basin closure, global water governance discourse shifts and escalating conflicts over water resources (Molle, 2008b; Molle and Wester, 2009). It is thought to be partly rooted in a broader nationalist ideology of central Thai dominance over a diverse and problematic “other” at the state’s margins (Winichakul, 1995) combined with a strong royalist discourse linked to the cult of the present monarch, Rama IX (Fong, 2009). Drawing from a range of interpretations of “ideology”, irrigationalism is suggested to largely reflect the interests and values of a dominant elite group in Thai society and forms part of a strongly nationalist mission of control over the periphery. In Wittfogel’s (1957) notion of despotic “hydraulic societies”, he identified a typical domination by an agro-managerial bureaucratic elite class devoted to promoting and controlling hydraulic construction, which strongly resonates with the present findings and recognized several decades ago by Wijeyewardene (1973). At the apex of Wittfogel’s classical hierarchic hydraulic state, there was invariably an autocratic ruler, whose power “was total and not benevolent”, a claim that can be tested in the context of modern Thailand. It links the notion of irrigationalism to the hydraulic society hypothesis, by using a single Northeast river basin (the Nam Songkhram) as an empirical case study to explore critical questions about the discourses, actors and practices surrounding irrigation development that sustain unequal power relations in Thai society.

1.6 Significance of research

This thesis attempts to make a modest contribution to wider critical political ecology research, by addressing questions concerning social processes, pathways and discourses of irrigation development and societal water control. As such, it attempts an engagement with key tenets of Wittfogel’s hydraulic society hypothesis in the

context of the inherently politically contested field of irrigation development paradigms in Thailand. Irrigation development and water control in modern Thai society are investigated through the lens of a post-structuralist critical political ecology approach that helps conceptualize and illuminate the competing narratives and actor interests involved. The research is especially concerned with differential power relations between actors and the notion of ideological domination, through state control of irrigation development pathways. It coins a novel term, namely “irrigationalism”, which owes inspiration to the earlier usage of “irrigationism” by Adams (1992) and Hamilton-McKenzie’s (2009) “irrigationist philosophy”, with a slightly broadened politicized meaning to that intended by these authors. It aims to offer novel ways of conceptualizing rarely considered political drivers of irrigation development and proximate causes of conflict occurring not only within the borders of Thailand, but quite probably neighbouring societies in mainland Southeast Asia, (including Burma, Cambodia, Laos and Vietnam), thus opening up space for later comparative empirical research. Lastly, the thesis could be interpreted as a challenge to would-be irrigation *developmentistas* to pay closer heed to the warnings given by Postel (1999), that civilizations which opt to generally abuse and over-develop water resources, also threaten to undermine the very social and ecological fabric of society transformed in the co-evolutionary process of irrigation-based hydraulic development.

1.7 Thesis genesis and personal positionality

Before progressing into the main study, it might be helpful for the reader to gain a basic understanding about the author’s personal interest in the broad subject matter of this thesis, namely exploring some of the underlying socio-political drivers of irrigation development in Thai society. Having worked in Northeast Thailand for the best part of a dozen years in a number of positions and disciplinary fields directly and indirectly related to water resources management, I gained the opportunity to observe a large number of public irrigation systems across a range of scales, from small, groundwater-supplied systems covering little more than a hectare in size, right up to large-scale, pumped and gravity-fed irrigation systems that extend to tens of

thousands of hectares managed under the aegis of the Royal Irrigation Department and other state agencies.

A number of issues struck me about the development of these systems including: firstly, the consistently vast sums of donor and public funds allocated to their planning, construction, operation and maintenance with little apparent post-facto evaluation or scrutiny; secondly, the notable rarity of dry season irrigated agriculture practiced, including many systems that had been entirely abandoned, and an invariably low level of water user participation at all project stages; thirdly, in terms of ownership the systems were generally regarded by both local users and officials alike as state property, as they were financed entirely from the national “development” purse and there was minimal local contributions (financial or otherwise) at any stage of planning and construction; fourthly, successive governments sooner or later in their term of office called for more and larger irrigation development schemes to be built, often in the same areas where earlier systems were failing, usually citing water scarcity as the justification; and fifthly, nagging questions arose as to why so few people appeared to challenge the underlying logic supporting continual irrigation development by the state, given what appeared to be an appalling record of implementation “success”. The purported benefits seemed to be based largely on articles of faith and taken-for-granted assumptions by their proponents, while comprehensive and independent evaluations of the sector seemed to be singularly absent, even while recent proposals for tapping the water of neighbouring nation’s rivers for irrigation gather momentum. It appeared to me that irrigation development was tied in some way to a dominant ideology or politicized set of values that had become embedded in the national psyche and could not be simply explained by standard socio-economic rationality or techno-centric modernity narratives.

The longer I remained in Thailand, the more curious I became about the apparent lack of societal reflexivity at local or national levels concerning any coherent justification for continued investment in an irrigation development paradigm. On one hand, I heard perennial siren calls from various national leaders for further irrigation expansion on seemingly the most flimsy of pretexts; and on the other, personally observed and read numerous accounts from civil society actors about the mounting social and environmental costs of past irrigation development projects across the

Northeast. Such projects tend to generate cumulative costs which have thus far been inadequately internalized by society but will nevertheless have to be paid for by this and future generations; as has been recorded with societies elsewhere transfixed by unsustainable irrigation development paradigms (Postel, 1999). Furthermore, where limited domestic criticism or doubts about the wisdom of further irrigation investment has emerged, it invariably failed to make any overt connections between the ability to control water for irrigation and by extension, how this created new opportunities to exert political control over society. Rather most criticism tended to get mired at the social, ecological, economical or technical levels and ignored the cultural and political aspects. As I pondered these issues and implications, it strengthened my conviction that the core societal issues were under-researched, possibly because it represented a sensitive “off-limits” research topic, that inevitably brushed up against “untouchable” actors and “black box” institutions rarely broached in the cultural and political milieu of Thailand’s contentious societal power relations. This realization, I believe, becomes all the more prescient as the present king’s health declines and questions of monarchical succession and future political scenarios in the post-Rama IX era loom large.

1.8 Structure of the thesis

The structure of the thesis is ordered in such a way as to address the “research problem” posed in this introductory chapter and solidified into a research question in the following chapter, in a logical manner. Below, I provide a brief summary of each of the subsequent conceptual, methodological and empirical chapters, followed by the conclusions in Chapter 11.

Chapter Two forms a literature review that details some of the important bodies of work informing the study and principle theoretical concepts utilized. It begins with a consideration of contribution of Wittfogel’s “hydraulic society” hypothesis and the associated debates that were subsequently precipitated, both in Southeast Asia and more generally. It examines the conceptual relevance of certain notions embodied within hydraulic society theory and contends that it may be time for a reappraisal of this theory in the context of Thailand’s modern irrigation development paradigm. It

also considers other closely related conceptual themes, such as the more recent “hydraulic mission” notion and the scale-bound literature surrounding hydropolitics in the Mekong Basin, before reviewing some of the literature that has previously linked irrigation development pathways with ideological underpinnings across a variety of contexts globally.

Chapter Three establishes and justifies the study’s conceptual framework, laying out the main conceptual terms employed that underpin the contentions of the thesis to be developed, building on the concepts already outlined in the previous chapter. Following on, **Chapter Four** outlines the research design, data collection methods and main analytical approach employed that comprise the thesis methodology. The chapter helps to justify the case study approach taken and choice of location in Northeast Thailand, while elaborating field research methods and tools adopted and concludes with a listing of the sub-questions posed to support the overall main research question.

Having established the methodological approach of the thesis, **Chapter Five** outlines and defines the notion of *irrigationalism* (or irrigational developmentalism) in some detail. The chapter begins by considering to what degree irrigationalism fits within some commonly understood concepts of ideology and how it is seen to embody socio-political “action-oriented” sets of beliefs, closely related to utopian and nationalistic visions of farming livelihoods and landscapes, in which irrigation is central. It addresses the question of the likely historical roots and origins of this ideology, looking back to the late nineteenth century and processes of elite group statemaking for explanation, and examines the associated narratives and actors, both historically and in recent times.

Chapter Six considers the wider regional socio-historical and environmental context of Northeast Thailand, specifically locating the historical roots of the socially constructed “received wisdom” that causally links regional poverty with narratives of natural resources scarcity and drought, as the dominant state-led problem framing for the region. Using discourse analysis approaches, it finds that the development orthodoxy that defines the region in the present context can partly be traced back to early twentieth century accounts by European travelers and ruling national elites. The dominant narrative has been socially reproduced through the years to now

become an integral part of popular discourse, seen in a wide variety of media, and evident in the responses of members of the public questioned as part of a survey of perceptions around water resources development. It is argued that such dominant narratives necessarily constrain and dictate the available development solutions, which have consistently favoured supply-oriented, technocentric and irrigational or hydraulic agriculture approaches during the last six decades.

Chapter Seven examines in depth the case of a single utopian regional-scale hydraulic development project of the late 1980s that incorporated a number of recurrent meta-justifications, used in similar irrigational “mega-projects” since. Known as the Green Isaan Project, in the public transcript (drawn principally from a historical narrative analysis of press cuttings) it was originally conceived by the king to be a solution to an environmental crisis of water scarcity and deforestation, and controversially entrusted to the military to implement. Over time it grew into an overarching regional development project that drew in multiple strategic actors and groups into its orbit, state and non-state, both supportive and oppositional. This chapter examines the contested public discourse around the project, the actors and their practices, and considers why despite a failure to be implemented, its spirit live on in present ideological clones.

Chapter Eight narrows down the scalar analysis lens to the local level using empirical evidence from a number of irrigation project case studies in the Nam Songkhram Basin, across a range of scales. As such, it considers in detail the micro-politics or everyday politics of irrigation development in each case and shows how each has emerged out of a process of contestation and struggle, which in the case of the Lam Nam Oon Irrigation Project, involved central state coercion and violence to succeed initially, later to be replaced by more consensual processes of domination. Even the two smallest projects studied are shown to be top-down and bureaucratically driven, relying on complex political networks of actors tied to the core hydrocracies, where discourses of irrigationalism are never far away, even when no actual irrigation practice is engendered by the project

Chapter Nine attempts draw upon the previous three chapters in conceptualizing power relations apparent in the multi-scalar politics of irrigation development and control of water, power and capital in Northeast Thailand. It begins by looking at the

competitive nature of the main hydrocracies and shows how authority may simultaneously be centralized at the core, but also dispersed between state agencies in a complex and dynamic process, where strategic groups emerge and compete for control of resources. At the provincial and local levels, networks of actors and actor groups (employing cliques and patron-client relations) tend to cluster around common development discourses (“discourse coalitions”), while trying to compete for benefits, that may be material and non-material. Some of the popular narratives and practices are elaborated upon using primary and secondary data from the field. It also considers some of the counter-narratives of groups opposing irrigational development at local, river basin and wider regional/national contexts.

Chapter Ten provides an in-depth exploration of the present monarch’s pivotal contributions to irrigation development discourse and practice over the course of his long reign. It attempts to establish to what extent he fits the Wittfogel model of a hydraulic despot, portrayed as the ultimate arbiter and power holder in a hydraulic society, via a historical examination of his material and symbolic role in the modern Thai water resources development paradigm, with special consideration to empirical evidence gained from the Nam Songkhram Basin case study. Although his discursive and symbolic presence in irrigation policy and practice is ubiquitous, it concludes the king should be considered more hydraulic high priest than despot.

In the concluding chapter, **Chapter Eleven**, the findings of the empirical chapters are summarized and discussed. The thesis contends that, broadly supporting Wittfogel’s (1957) assertion, Thailand provides a striking variant of a modern hydraulic society, showing more centralized agro-managerial control at present than at any time in the past, with a trend towards increasing centralization, especially if more large-scale projects are implemented. Existing hydroagricultural modes of production are gradually being replaced by state-centric hydraulic agriculture, as the dominant core attempts to gain control of the margins in a contested process of socio-ecological transformation. It is argued that a powerful set of elite actors, comprised of five key groups have combined strategically in what I term a “hydraulic network monarchy” (where the symbolic and discursive power of the king has been a constant), employ the ideology of irrigationalism to enable power-laden processes of state simplification and legibility to take control over the periphery. Lastly, some recommendations for further research are offered.

Chapter 2 Literature Review

2.1 Introduction

This chapter aims to provide an introduction to some of the primary literature informing the field of Southeast Asian socio-political hydraulic development. Some theoretical links between water control through irrigation development and society are explicated, with particular reference to debates about water resources control and state formation, sparked by Wittfogel's hydraulic society theory. Part of the task of this section is to review and discuss some of the main bodies of literature on various sides of the debate that relate to the case of Thailand's development. By taking a fresh look at some of the main tenets of Wittfogel's "hydraulic society" theory and associated criticisms in the context of Southeast Asia generally and Thailand specifically, it may allow for a more informed approach to understanding modern state-society-water relationships, especially when attention is paid to national and regional discourses of irrigation development and related actors and practices. The chapter suggests that elements of Wittfogel's most important theoretical contributions have possibly been prematurely rejected, overlooked or misconstrued by some of his critics.

After a discussion of the potential explanatory value of Wittfogelian notions to the modern hydraulic development paradigm of Thailand, the chapter moves on to provide a broad conceptual overview of regional hydropolitics and societal power relations, with a special emphasis on the concept of the "hydraulic mission" and water conflicts, at the transboundary, national and sub-national levels. It goes on to consider the relevance of an ideology of irrigation development to this debate. The chapter concludes with a brief reconsideration of the potential relevance of Wittfogel's theories to modern Thailand's experience vis à vis other theoretical frameworks and how they have informed the research questions and approach.

2.2 Wittfogel's hydraulic society hypothesis

“Any discussion of irrigation bureaucracy should acknowledge its relationship to the well-known propositions of ‘hydraulic society’ elaborated by Wittfogel (1957).” (Source: Coward, 1980c:330)

I draw attention to Coward's recommendation as a useful starting point for this literature review. Of all scholars that have proposed theories concerning the relationships between water control, state formation and society, probably none have been more influential, or more controversial, than Karl A. Wittfogel (1896-1988). Wittfogel's work has been variously lauded, embraced, rejected, vilified and quite often misunderstood by social scientists engaged across diverse disciplines (Mitchell, 1973; Peet, 1985; Price, 1994). In the view of Robbins (2004), his scholarship has been widely interpreted as epitomizing a materialist and neo-colonialist view of history, for investigating relationships between nature and society that provided a generalized explanation for how the political history of certain centralized states were a result of the problems of water resources management.

Drawing from the writings of Marx (“modes of production”), Engels (“Asiatic society”) and Weber (“formation of bureaucracy”), Wittfogel began to develop meta-theories about the fundamental characteristics of certain Oriental societies, in particular China, related to environmental history¹³. He initially theorized that control of water through large-scale irrigation and other hydraulic works was the basis of a peculiarly “Asiatic mode of production”¹⁴ and accompanied by the rise of a powerful and exploitative ruling class (the “hydraulic bureaucracy”), which was termed a theory of “hydraulic monopoly.” Following emigration from Nazi Germany to North America in the early 1930s, Wittfogel began to substitute the phrase “hydraulic society” for “Oriental society” in his writings, to indicate a mode of production more aligned with water control and its associated social order, although he retained the latter term in the title of his magnum opus, *Oriental Despotism: A Comparative Study of Total Power*, notes Worster (1992). The new nomenclature

¹³ Refer to Peet (1985), for a comprehensive analysis of Wittfogel's broad intellectual contributions in *Introduction to the Life and Thought of Karl Wittfogel*

¹⁴ Wittfogel devotes an entire chapter in *Oriental Despotism* to an analysis of “The rise and fall of the theory of the Asiatic mode of production”, calling for its re-examination based on the twentieth century rise of totalitarian states under the banner of “Marxism-Leninism” and understandings of multi-linear processes of development.

stressed human action rather than geography, thereby facilitating a comparison with “industrial society” or “feudal society”, and stressed the prominent role of government in agricultural management and hydraulic infrastructure construction (Wittfogel, 1957:3).

Wittfogel’s basic theory claimed that state organization first emerged in arid or semi-arid regions of the world (e.g. parts of ancient Egypt, China, Mesopotamia, Sri Lanka, the Indus valley, and pre-Columbian Mexico and Peru), where systems of irrigation, drainage, aqueducts, navigation canals and flood control (typified as hydraulic works¹⁵) were zealously pursued by a ruling “agrobureaucratic class”, to dominate the hydraulic means of agricultural production. A crucial condition governing the development of a centralized irrigation system was the presence of a riverine floodplain that was ecologically circumscribed, yet provided ample annual water flow. According to the theory, only a powerful and complex state organization could manage the multiple activities and problems associated with large-scale irrigated agriculture, such as its planning, construction, enlargement, operation and maintenance; the allocation of water between upstream and downstream cultivators; the arbitration of conflicts; and tax collection functions. Furthermore, Wittfogel argued that the very centralized power afforded by the technological control of water resources resulted in the fundamentally despotic forms of governance found in these early hydraulic civilizations. Absolutism or totalitarianism was presumed to be the norm, while civil society was characteristically poorly developed and routinely oppressed where it appeared. Wittfogel noted that these societies had particular class differentiations, labour divisions and specialization typical of centralized urban life within a limited core area, surrounded by large interstitial and peripheral areas. He stressed that the marginal areas were politically connected to the hydraulic core areas, but they could also exist independently. Another defining feature of these hydraulic states was that they were frequently ruled by theocratic emperors or kings (often revered as semi-divine gods), in a more or less despotic manner. In the words of Wittfogel (1957:92), “[T]he agromanageial sovereign cemented his secular position

¹⁵ Wittfogel (1957:42) makes it explicit that non-hydraulic construction works such as defence and communication structures and “edifices serving the public and personal needs of the secular and religious masters of hydraulic society” (e.g. palaces, tombs and temples) were also an integral part of hydraulic societies’ development.

by attaching to himself in one form or another of the symbols of supreme religious authority.”

A characteristic of hydraulic societies was that there tended to be an absence of societal checks with few independent centres of authority capable of thwarting the regime’s power, argued Wittfogel (1957). Popular revolution was near impossible, and so even when a ruling dynasty died out or was overthrown by force, the new regime was unlikely to differ very much from the old. With power concentrated in the hands of the absolute rulers, military coercion had to be routinely used to terrorize the subjects, with members of the hydraulic society adjusting their behaviour accordingly – “obedience becomes the basis of good citizenship” (Wittfogel, 1957:149). He stressed the remarkable “staying-power” of hydraulic society rulers through the domination of “the technical and intellectual skills necessary to its perpetuation” by the monopolistic bureaucracy (Wittfogel, 1957:422). Societal change was perceived to be dependent on external non-hydraulic forces and instances of internal transformation were rare.

Significantly, Wittfogel considered Thailand (or Siam, as it was pre-1939) to be an example of a hydraulic society, classifying it as a representative of “Type I: Aloof independence”, referring to what he saw as minimal direct interference exercised by Western powers in the country’s internal affairs (Wittfogel, 1957:425). He claims that as a result, “Thailand remained an independent and more or less aloof hydraulic society, which was free to adopt or disregard Western institutions and culture.” It is surprising however, that Wittfogel provides no more than a few sentences to justify his classification of Thailand’s as a hydraulic society, briefly noting that the government constructed a number of canals for “productive and protective” purposes, such as transport of rice surpluses to the capital and troop movements (Wittfogel, 1957:32). Such a superficial treatment of the Thai case suggested that he had not studied it in any great depth (unlike China, for instance) and his conclusion was based on a limited evidential base. I return later to the specific case of Thailand and arguments made for and against its classification as a hydraulic society, after first considering some more general criticisms leveled against Wittfogel’s hypothesis and its theoretical application to monsoonal Southeast Asia.

2.2.1 Criticisms of hydraulic society theory

Following its publication, Wittfogel's thesis attracted much scholarly debate that highlighted certain limitations of his theory suggesting some kind of universal linearity between irrigation development, state formation and centralized power, and refutation of whether this necessarily leads to formation of a despotic state (Molle et al., 2009d). Some critics questioned the direction of causation, arguing that the formation of large, centralized states may precede and lead to the construction of large-scale hydraulic infrastructure (Steward, 1977). Mitchell (1973:532) argued that certain scholars took exception to the notion that centralized political power in the early states mentioned by Wittfogel centered upon control of irrigation activities, leading to "a premature rejection of the hypothesis". Chambers (1980:47) points out that Wittfogel's theories supported a "tendency to see the forms of irrigation organization as unavoidable, as generated and required by imperatives of the physical system and its technology", thereby lending itself to deterministic interpretations. Cohen (1992) accuses Wittfogel of "technological determinism" for suggesting a relationship between technology and social structure. In citing the work of other critics, (Robbins, 2004:48) goes further and condemns Wittfogel's thesis as "fundamentally flawed on both empirical and theoretical grounds" and claims that, "there is no evidence of an empirical association between large irrigation schemes and centralized authority either in contemporary cases or ancient periods (Butzer 1976; Hunt 1988)". Noting that detailed comparative and case-based studies conducted in the decades following the publication of *Oriental Despotism* provided counter-evidence to Wittfogel's theory, Robbins (2004) argues that this demonstrated that large irrigation schemes may be collectively managed by decentralized producer associations as effectively as centralized bureaucracies, repeating a popular critique of the theory.

Price (1994:193) noted a marked tendency for academic detractors of Wittfogel, "to merely cite it to dismiss it instantly as 'reductionistic', 'simplistic', or 'mechanical'", without a more thorough reading. As well as accusations of ecological determinism, Robbins (2004) laid charges that Wittfogel's writings demonstrated a tendency

towards Eurocentric historical thinking and classic “Orientalism”¹⁶. Robbins warns that the hydraulic society thesis provides a “cautionary tale” for how political ecology should proceed in causal explanations of social phenomena, by avoiding mistakes of reductionism. Other critics claimed that Wittfogel imagined hydraulic states everywhere he looked in the communist or oriental world (e.g. Dunn, 1982; Worsley, 1984). However, Peet (1985:8) in a retrospective of Wittfogel’s scholarship, maintains that he was not a historical materialist as frequently claimed, but accepted that “humans proceeded not as passive instruments of an irresistible, unilinear development force but as a [sic] discriminating, active beings, shaping their futures.”

A number of studies have offered counter-illustrations of why certain societies in the global South developed complexity through irrigation systems, without succumbing to the totalitarianism associated with the hydraulic society thesis. For example, Clifford Geertz’s widely cited anthropological studies of the *subak* irrigation systems in Bali (Geertz, 1959, 1980); secondly Lansing (1992) who also explicated the social relations pertaining to the “water temples” of Bali; Leach (1959) in the case of Sri Lanka¹⁷; and across several global locations stands the work of Hunt (1988), who found no direct relationship between size of irrigation system and structure of authority. Similar claims have been repeated by Southeast Asia scholars to dismiss the theoretical basis for the existence of early hydraulic societies in the region, including several papers contained in Rigg’s (1992) collection, *The Gift of Water*, with the case of the ancient Khmer empire¹⁸ exciting most controversy. Of the contributors, Stott (1992) is perhaps most outspoken against the validity of the hydraulic society theory for explaining the rise and longevity of the Angkorian empire¹⁹. Stott traces these “insidious Western interpretations” of Angkor as a great

¹⁶ “Orientalism” is regarded as a trait of much Western scholarship which assumes fundamental differences between “Eastern” and “Western” civilizations that inevitably lead to culturally deterministic conclusions, as critiqued by Edward Said (1978). In the view of Robbins (2004:48), such explanations serve “to reinforce the artificial hierarchy of colonial thinking, where the traditionally colonized and dominated communities of the East (India, China, Arabia) are naturally inferior, bound in changeless tradition, and given to despotic rule.”

¹⁷ Leach (1980:92-3) later adjusted his stance and claimed that the classical Sinhalese kingdom was “a striking and characteristic example of what Wittfogel has called ‘hydraulic civilization’”, but lacked an “Oriental despot”.

¹⁸ The Khmer empire stretched over much of contemporary Cambodia and large parts of Laos, Northeast and Central Thailand between the 9th and 15th century A.D., centered on the city-state of Angkor on the northern shores of the Tonle Sap lake

¹⁹ It should be noted that Wittfogel himself made no specific claims for the Khmer empire qualifying an example of a hydraulic society, with not a single reference to Cambodia (modern or ancient) in the

hydraulic state back to colonial French explorations at the end of the 19th century, essentially blaming a “long dominant ideology” of Orientalism for continuation of the paradigm into the 20th century (e.g. Groslier and Arthaus, 1966; Groslier, 1979).

Stott (1992) examines four strands of historical and other scholarly evidence used to support the existence of a large, state-managed irrigation system in Angkor, and comes to the conclusion that there is an absolute lack of evidence to support the contention that the *baaray* (reservoirs) were used for irrigation purposes. He believes the strongest arguments for the rejection of the hydraulic society hypothesis came from agronomic and engineering evidence provided by van Liere (1980), pointing to the absence of outlet and irrigation distribution systems to fields and calculations made supporting a view that the *baaray*²⁰ contained insufficient water to support large-scale irrigated agriculture. The most likely type of agriculture that permitted a rice surplus to support the urban centres of Angkor was flood recession farming, which according to Stott (1992:55), provided “the real economic basis of the Empire”. This form of agriculture allowed three or four crops of rice to be harvested in sequence as the floodwaters retreated which he described as, “a brilliant, farmer-level South East Asian response to a distinctive set of local environmental conditions” (Stott, 1992:53). Moore (1992), studying archaeological evidence of early, pre-Khmer water management in Northeast Thailand echoes Stott’s views claiming that although the early peoples of this region were influenced by foreign technologies and religions, their method of water enclosure was considered a unique response to the local ecology. As a result of the perceived lack of state agro-managerialism, he called for a “total rejection of the term and the concept of the ‘hydraulic society’ in the case of the Khmer Empire” (Stott, 1992:50) and believed the evidence served to illustrate that Angkor was “yet another example of a state founded on ‘hydroagriculture’”²¹.

entire book. Thus, any claims of the general theory of hydraulic society being relevant to Angkorian state formation and the water resources management system has been made by later observers.

²⁰ The largest *baaray* at Angkor, the Western Baaray, measures 8,000 m by 2,100 m. Other large *baaray* are the Eastern Baaray (2,000 m x 7,000 m), the North Baaray (900 m x 3,700 m) and Indratataka (3,800m x 800 m) (Mabbett and Chandler, 1995), illustrating the ambitious scale of these hydraulic structures.

²¹ Ironically perhaps, Stott here adopts Wittfogel’s own terminology, using it to refer to farming based on small-scale irrigation and rainfall, while still rejecting the overall tenets of the hydraulic society theory.

Another paper in the same volume, while not necessarily rejecting Groslier's (1979) conjecture that the *baaray* had an agricultural function, attacked Wittfogel's assertions that "the creation and maintenance of hydraulic works in Asia was a prime example of the despotism of a centralized court bureaucracy, with a monopoly of managerial as well as technical expertise, over the undifferentiated rural population", as being unsupported by evidence, even in the archetypal case of China (Stargardt, 1992). In Stargardt's view, the ancient court-based kingdoms of Southeast Asia were not construed as necessarily despotic, but tended more towards benevolent or consensual arrangements in their efforts to command mass labour for construction of the great structures that typified the state cores. Furthermore, she maintained that local people managing water resources infrastructure retained a degree of autonomy from the state through later centuries of war, strife, and collapses of central authority, thus preserving their essential function and utility to recent times. "This view of the power relationships between court and countryside differs fundamentally from Wittfogel's concept of a 'State Larger than Society'" (Stargardt, 1992:63). Likewise, Christie (1992), supporting the conclusions of Geertz (1959) and Lansing (1992) from the study of early Javan states, argued there was no evidence for linking the appearance of early states to the control of irrigation.

For other commentators, it was recognized that the agricultural systems and hydraulic infrastructure of the Khmer empire played an influential role in the cultural, religious and political formation of later neighbouring states, including the Sukhothai kingdom and subsequently Siam (Falvey, 2000). Wittfogel was emphatic that the leaders of hydraulic societies were "great builders" and their public constructions went beyond large-scale irrigation systems to include other types of hydraulic and non-hydraulic works (see Footnote 15). Water infrastructure was constructed for a wide variety of productive and protective purposes, in addition to aesthetic, religious and symbolic uses. The Angkor complex and wider empire (which covered much of modern day Central and Northeast Thailand) provides archaeological remains of many of the types of infrastructure mentioned by Wittfogel, with the possible exception of aqueducts. At the city level of Angkor, two main water management features can be identified, namely the *baaray* plus various linear features such as water channels, roads and embankments, which have been interpreted as the city's communications network (Hayao, 2001; Kumm, 2009). It has been suggested that

the grandest of these earthen structures were built at the command of the Hindu god-kings (*deva raajaa*), whose outward expression of power was partially based on control and management of water, but also a rich religious and cultural symbolism embodied in the structures (Mabbett and Chandler, 1995). At a more localized scale, historians have noted similar cultural symbolism occurring in archaeological sites throughout the Khmer empire. For example, Vallibhotama (personal interview, 9 April, 2010) noted the inseparability of the *baaray* from the temples (*prasaat* or *puraa*)²² and that neither could have been established without the order of the king, high ranking official or local lord. The *puraa* and *baaray* “reflected the political religion that served to maintain the state and society in the dry area”, argues Vallibhotama (1999:112). The king was the largest land owner, while the temple controlled the labour, based on an easy accommodation of the *deva-raajaa* belief system. According to van Liere (1980), various stone inscriptions between the ninth to thirteenth centuries proclaimed the king as both creator and director of public works.

A strong Khmer influence is also believed to be evident in the agricultural technologies and techniques adopted by the inhabitants of the later Tai states, which according to Falvey (2000:44), “continues to flow through Thai agricultural development and culture”. Although the Tai states were eventually able to overrun and sack the declining Khmer empire, believed to be related to the costs of trying to maintain elaborate hydraulic systems and declining rice yields, the centrality of producing rice surpluses and controlling land, labour and water supplies remained intact. According to Wittfogel (1957:47), the hydraulic rulers were strong enough “to do on a national scale what a feudal sovereign or lord could only accomplish within the borders of his domain. They compelled able-bodied commoners to work for them through the agency of the *corvée*.” Wittfogel pointed out that *corvée* labour differed from slave labour in that workers were conscripted on a temporary, but recurring, basis. The *corvée* labourer, thus, was freer than a slave, but less free than a waged labourer.

It is recognized that the use of slaves, conscripted armies and *corvée* labour were routinely used by the Siamese government up to the start of the twentieth century for

²² According to the Hindu-Buddhist cosmology the *baaray* and *puraa* were the physical manifestations of Mount Meru and its surrounding celestial ocean.

canal digging, flood protection and other state infrastructure projects in the Central Plains (Nabarath, 2000; Brummelhuis, 2005). Feeny (1989) reports that in the middle of the nineteenth century, one quarter to one third of the population of Siam belonged to one of seven categories of “slaves”²³. Cohen (1992) documented how a late nineteenth century aristocrat (Chao Mahawong) appointed by the northern Thai ruler of Chiang Mai (Chao Inthanon) seized ricelands (both irrigated and rainfed) from peasants and appropriated them as royal land (*naa luang*), providing a rather different interpretation to the degree of local agency perceived by Stott (1992) and others. Villagers under Chao Mahawong’s jurisdiction were corvéeed to work the royal lands and expected to surrender the total yield of the wet season rice crop and half the yield of the early-season crop. Peasants were also corvéeed to dig and maintain irrigation canals, prompting Cohen (1992:62) to argue that this state elite control of irrigation represented a means to increase extractable surplus, “either by expanding the area of irrigated royal fields or by improving the supply of water to existing royal fields.” Cohen also expressed a degree of scepticism over the relevance of elements of Wittfogel’s hypothesis (1992:64), maintaining that the contemporary Thai state did not assume control over irrigation in these areas out of any technological or managerial necessity.

A more recent historical study surrounding the central Thai state polity with regards to irrigation development plans during the early part of the twentieth century, titled *King of the Waters: Homan van der Heide and the origin of modern irrigation in Siam* by Brummelhuis (2005), also roundly rejects the hydraulic society theory from the start. Like Stott and others, Brummelhuis took the opinion that hydraulic society referred primarily to strong state control over water resources for irrigational purposes alone and not the other protective, productive, cultural and spiritual purposes actually referred to by Wittfogel. He sympathetically constructs the case of a colonial Dutch irrigation engineer, described as being “absolute in character”²⁴

²³ In the view of Brummelhuis (2005), the conditions for and what constituted slavery in Siam were different from Western concepts of slavery under market-oriented and capitalist society, such as those brought from Africa to work in the plantations of the Americas. For example, there was no open slave market and slaves were mostly obtained as spoils of war (“war slaves”) or acted as collateral on loans (“debt slaves”). Prince Dilok Nabarath, one of King Chulalongkorn’s many sons, notes that there was a third category, namely “born slaves”, and claims that the relationship between master and slave was “generally a humane, good and patriarchal one” (Nabarath, 2000: 40). Slavery was officially abolished in 1905 by King Chulalongkorn (1868-1910).

²⁴ Brummelhuis (2005:xiii) contends that van der Heide’s character, “brooked no argument, was convinced he was right and in his own field could not accept a boss above him.”

(Brummelhuis, 2005:xiii), who played a decisive role in designing a grand irrigation scheme for the Chao Phraya Delta²⁵ and establishment of an irrigation department in Thailand, briefly headed by the protagonist. While he argued that there was little empirical evidence to make a causal connection between rice cultivation, water control, irrigation and a despotic state in Old Siam, he did concede that Ayutthaya, and later Bangkok, were at the centre of a remarkable “hydro-economy”, based on a network of extensive canals (*khlong*) and engineered waterways. From this account, the control of labour is portrayed as determining a facet of Siamese statecraft as any technological control of water practiced, albeit adopted for a mix of agricultural and non-agricultural purposes.

2.2.2 Hydraulic society defenders

After decades of attracting criticism, there would seem to be a recent trend towards a reconsideration of Wittfogel’s theoretical contributions and efforts to re-interpret his work within modern contexts of development. Drawing attention to anti-Wittfogelian perceptions amongst some scholars, the environmental historian Donald Worster²⁶ argued, “[o]ne of the most serious weaknesses in that literature..... is that the modern experience with irrigation hardly appears in it. Nowhere do the ecological anthropologists - nor does Wittfogel for that matter - seem to realise that the link between water control and social power might occur in places other than the archaic cradles of civilization nor that the past hundred years have seen more irrigation development than all of previous history” (Worster, 1992:30). Worster contends that far from being restricted to distant “oriental” or totalitarian states, a modern day hydraulic society can be found in the western United States, where he finds parallels between the centralized regimes of archaic hydraulic civilizations and the powerful state agencies of the Army Corps of Engineers and the Bureau of Reclamation. Furthermore, he points out that many of Wittfogel’s detractors have overlooked the

²⁵ The Chainat Dam was eventually built in the 1950s using World Bank funding, diverting water across the lower Chao Phraya Delta Irrigation Scheme (Kaida, 2003).

²⁶ Worster’s (1985) classic book, *Rivers of Empire: Water, Aridity and the Growth of the American West*, documents the extent to which the irrigation development paradigm of the modern “hydraulic West” has resulted in extensive ecological damage, a reallocation of power (as well as water) to bureaucratic and corporate elites and societal conflict, based largely on a series of national myths and illusions.

critical distinction he made between capitalist and command economies, and mistakenly accused him of laying a blanket accusation of totalitarianism across Asian irrigation regimes.

As noted in the previous section, some critics have claimed that irrigation-based societies evolved at multiple locations, without developing into forms of despotic hydraulic states purportedly predicted by Wittfogel's model. Several of the cases regarded voluntarism, local ingenuity and community-led irrigation as being the norm; rather than elite coercion, despotism and state-centric hydraulic development. These same critics in mainland Southeast Asia have invariably failed to make linkages between the historical context under study and the modern milieu to assess degrees of continuity concerning patterns and processes of state-society irrigation development. Where links have been made, however, it has invariably been used as evidence against the tenability of the hydraulic society hypothesis, such as with nostalgic references to the *muang fai*²⁷ irrigation systems of Northern Thailand. These are offered as evidence of the supremacy of local agency, communalism and polycentric patterns in irrigation governance being the norm (e.g. Tan-Kim-Yong et al., 2005; Surarerks, 2006). Stott (1992:53), for example, refers to *muang fai* irrigation as representing "extremely subtle, local, small-scale, community-based adaptations to the specific environments in which they occurred." Thus no sense of the presence of an external authoritarian regime or despotic over-lords is admitted in this overly romanticized view of peasant-managed irrigation systems. Such perspectives regarding the *muang fai* systems have been contradicted by accounts that question both the present and historical degree of independence from state mechanisms and level of genuine local control exercised (e.g. Wijeyewardene, 1973; Cohen, 1992; Neef et al., 2006). In a consideration of the degree of state interference in irrigational water control during earlier periods of Thai history, Ishii (1978) termed the northern Tai kingdoms "quasi-hydraulic societies", occupying what he termed "ancient core areas". Like with Wittfogel's distinction between "hydro-agriculture" and "hydraulic agriculture"²⁸, Ishii recognized that in a monsoonal or

²⁷ *Muang fai* refers to small-scale diversionary weirs and canal irrigation systems developed primarily in the Tai administrative states of northern Thailand and Burma, supposedly dating back to the eighth-century and posited as ancient examples of democratic social organization (e.g. Attwater, 1997; Surarerks, 1998). A *muang* was the canal or channel structure, while the *fai* refers to a weir structure, often made with bamboo to be seasonal and required annual re-building after the rainy season.

²⁸ These terms are defined and explained in a following section.

humid tropical zone, irrigation has less of a decisive significance than in arid or semi-arid regions, where he contends “the control of irrigation offers an effective means of controlling the peasantry. But in a monsoon climate it is less easy to exercise effective control and to establish a despotic 'hydraulic society'” (Ishii, 1978:23).

Rigg (1992:3) in his editorial role of the Wittfogel rejectionist papers makes the argument, “just as the world is witnessing what seems to be a fundamental shift from ‘command’ to ‘guidance’ planning in the functioning and development of modern states (evident in South East Asia, in Cambodia, Laos and Vietnam), so there is a similar shift in the academic study of ancient states away from their ability to *command* production, and towards their role as *facilitators* in production”, suggesting that state “command and control” agricultural strategies were exaggerated and weakening. In the arena of Mekong Basin regional water resources development strategies, such a view tends to stand in contrast to other analyses that suggest little discernible decline in state control over hydraulic infrastructure development has occurred in practice (Contreras, 2007; Molle, 2007b), despite overall shifts in development rhetoric towards regional cooperation, decentralization, participation and privatization discourses, for instance.

Bucking the general trend of hydraulic society scepticism amongst anthropologists in Southeast Asia, Wittfogel’s hypothesis found a receptive ally with Gehan Wijeyewardene, who believed it had explanatory relevance to Thai state development and social relations, based on a study of irrigation systems in Northern Thailand (including *muang fai*) (Wijeyewardene, 1973). While recognizing the overly deterministic nature of some “hydraulic despotism” arguments, Wijeyewardene was able to disentangle Wittfogel’s personal political biases from his historical insights into state development and water control patterns. Supporting Brummelhuis (2005), he noted that the primary interest shown by the pre-modern Thai state in major waterworks (particularly an extensive system of canals) was for communication and transport of rice surpluses, rather than for irrigation purposes, but contended, “the history of hydraulic society and despotism in Thailand appears to lend support to Wittfogel’s more general thesis – as the growth of despotism seems not directly connected to ecological and productive factors” (Wijeyewardene, 1973:92-3). Wijeyewardene postulated that after the fall of the Ayutthaya kingdom

(post-1767), the Thai (Siamese) state centred on Bangkok became progressively more hydraulic and less despotic, at least in the Central Plains where during the latter part of the nineteenth century extensive irrigation development was heavily dependent on Western advice and modernization influences.

In the twentieth century, he considered the Thai bureaucracy to have become essentially agro-managerial, citing the 66-fold expansion of lands irrigated by state provision between 1907 and 1967, vast increases in bureaucratic spending on the irrigation sector, the movement of land and property into the hands of the bureaucrats “and the class they appear to dominate” (Wijeyewardene, 1973:101), and how both the government and the peasantry viewed irrigation provision as the state’s duty. He linked the state’s pre-eminence in water resources development to a nationalistic ideological bias, maintaining, “[I]n its official ideology, no doubt sincerely held, the bureaucracy is concerned with national development and security. National development means a strong and prosperous economy in which benefits will accrue to all sections of the population. *The irrigation programme is the most spectacular manifestation of this ideology*” (Wijeyewardene, 1973:100, emphasis added). Concluding that while Thailand did not have the “overriding factors” mentioned in Wittfogel’s theory (without elaborating in any detail), there was still evidence to suggest from a historical interpretation, “the country today is much more a hydraulic society than in the past” (Wijeyewardene, 1973:108). However, he concludes the paper by claiming a lack of certainty regarding the implications of this “fact” for Thailand’s socio-political present or future. Yet surprisingly perhaps, since this forty year old paper, no social scientist appears to have put Wijeyewardene’s assertions to the test, nor enquired what a modern hydraulic society might imply in the twenty first century. Seemingly, the hydraulic society concept has been either overlooked or summarily dismissed as being overly-deterministic and not been tested for explanatory validity for Thailand’s recent water resources development paradigm.

A more recent regional advocate of Wittfogel’s hypothesis applied to the modern context of water, state and society relations in an environment far removed from the classic arid or semi-arid contexts that Wittfogel primarily interested in, is Evers and Benedikter’s (2009b) paper examining the recent hydraulic development paradigm of the Mekong delta in Vietnam. Rather than focus on a monolithic powerful state

bureaucracy being the sole directing authority of development, the authors argue that this is an insufficient pre-condition for developing and maintaining a large hydraulic system. Instead, they highlight a number of other social groups (termed “strategic groups”²⁹) that variously compete and cooperate to stake a claim over control of water as the critical resource. In arguing the case for a “modern hydraulic society” in Vietnam, Evers and Benedikter (2009b) point to a process of socio-ecological transformation that accompanied the construction of a “dense and complex network of hydraulic works” throughout the delta, a process which has accelerated post-1975 re-unification under conditions of centralized socialist rule.

Hydraulic management in the delta contains both irrigation and flood control elements, with the authors stressing that after national re-unification, the initial construction of the hydraulic infrastructure entailed organizing thousands of peasants, soldiers and cadres to dig canals and build embankments, bringing to mind Wittfogel’s assertion that the hydraulic bureaucracy was able to command vast armies of labourers for maintaining the economic basis of the society³⁰. In recent decades, mechanization has inevitably displaced the utilization of mass labour, but now the strategic groups promoting hydraulic society instead corral and control lucrative state funds and overseas development aid in pursuance of their aims and interests. There are believed to be strong interlinkages operating between lower level strategic groups dominated by local people, recently privatized large-scale hydraulic construction companies and high-ranking hydraulic bureaucrats from the North, that have consolidated their power base under new economic and political conditions.

According to Price (1994), a key weakness of many of Wittfogel’s critics’ arguments is that they overlook the key distinction Wittfogel made between “hydraulic” and “hydroagriculture”. Wittfogel adopted these terms partly as a way to distinguish between the formation of societies that are rooted in irrigated agriculture, but lacked despotic forms of centralized government. As Wittfogel (1957:14) stressed, “[t]oo

²⁹ Further consideration is given of the conceptual term “strategic groups”, as defined by Evers and Benedikter (2009), in the Methodology chapter, Section 3.1.4

³⁰ I find this specific timing interesting, as evidence exists that in both “democratic” Thailand under M.R. Kukrit Pramoj and the Khmer Rouge totalitarian regime in Cambodia during the same period (i.e. 1975-78), similar efforts to mobilize vast armies of peasants to construct hydraulic earthworks were underway. In the case of Cambodia, many hundreds of thousands people died during the enforced construction of state-controlled irrigation development project, known as Pol Pot’s “Super Great Leap Forward” (Himel, 2007), but in Thailand the mobilization was considerably less repressive.

little or too much water does not necessarily lead to governmental water control; nor does governmental water control necessarily imply despotic methods of statecraft.” But in the words of Price (1994:190), “the worst caricatures of Wittfogel’s theory represent his argument as one in which all irrigation systems lead to a system of centralized decision making. Nothing could be further from the truth.” He argues that Wittfogel’s definition of hydroagricultural societies should have removed such misunderstanding:

“Strictly local tasks of digging, damming and water distribution can be performed by a single husbandman, a single family, or a small group of neighbours, and in this case, no far-reaching organizational steps are necessary. Hydroagriculture, farming based on small-scale irrigation, increases the food supply, but it does not involve the patterns of organization and social control that characterize hydraulic agriculture and Oriental Despotism.” (Wittfogel, 1957:18)

By way of contrast, Wittfogel notes that for the evolution of hydraulic agriculture to occur:

“If irrigation farming depends on the effective handling of a major supply of water, the distinctive quality of water – its tendency to gather in bulk – becomes institutionally decisive. A large quantity of water can be channeled and kept within bounds only by the use of mass labour; and this mass labour must be coordinated, disciplined and led. Thus a number of farmers eager to conquer arid lowlands and plains are forced to invoke the organizational devices which – *on the basis of premachine technology* – offer the one chance of success: they must work in cooperation with their fellows and subordinate themselves to a directing authority.” (Wittfogel, 1957:18 emphasis added)

Although Price (1994) concludes that there were instances where Wittfogel managed to misclassify hydroagricultural societies as hydraulic societies, citing Bali and Sri Lanka (noted by Leach, 1959) as examples, the point remains that this fundamental distinction between the two categories is critical to understanding Wittfogel’s theory. Another important issue often overlooked is that Wittfogel consistently maintained that classic hydraulic societies only occur in arid or semi-arid environments³¹, whereas many anthropologists have discounted his theories on the basis of studies

³¹ This would imply that Central Thailand could not qualify as a “classic hydraulic society”, given its location in the humid tropics with average annual rainfall between 1,000 – 1,800 mm across most of the range, although water can still be artificially scarce in such environments due to over-allocation of supplies.

made at locations that are remote from arid and practice various forms of irrigated agriculture (Hunt et al., 1976). A second point relates to scale, as the majority of anthropological studies that have dealt with irrigation systems and water control, have done so at the local level, usually in communities that depend on irrigation for a significant part of their agricultural production, whereas Wittfogel's general propositions were concerned with whole agrarian societies. Hence, there tends to be a logical gap between Wittfogel's hypotheses and the case studies which purport to test them, notes Hunt et al. (1976).

A further key distinction that Wittfogel made was differentiating among four levels of "hydraulic density", based on the degree to which agricultural societies differ in their reliance on hydraulic agriculture. He never claimed, as Price highlights, that the level of state control would covary with the size of an irrigation system, but he did claim that "the *bureaucratic density* of an agromananagerial society varies with its *hydraulic density*" (Wittfogel 1957:167 cited in Price, 1994:194, emphasis in original). Wittfogel gave the following definition of hydraulic density:

"The core areas of the hydraulic world manifest at least two major types of hydraulic density. Some are hydraulically compact, whereas others are hydraulically loose. A hydraulic society may be considered 'compact' when its hydraulic agriculture occupies a position of absolute or relative economic hegemony. It may be considered 'loose' when its hydraulic agriculture, while lacking economic superiority is sufficient to assure its leaders absolute organizational and political hegemony." (Wittfogel, 1957:166)

As can be ascertained from the first line of the quote above, Wittfogel distinguished between core and marginal areas, and beyond the marginal, proposed the existence of sub-marginal areas linked to the hydraulic civilization. Wittfogel clarified the primary division drawn between "compact" and "loose" hydraulic societies with further sub-divisions, such as spatially continuous or discontinuous variants, and relative or absolute economic hegemony of the central state. He also differentiated between those societies where hydraulic infrastructure development was primarily for productive or protective purposes, providing global historical examples of each

type of hydraulic density³² (Wittfogel, 1957:166). Price (1994) concedes that Wittfogel does not adequately operationalize his variables of hydraulic and bureaucratic density and makes some errors of classification concerning the examples given of each category.

The intention of this rather convoluted discussion is to help throw some light on past tendencies for swift dismissals and indeed, occasional misconceptions, regarding the hydraulic society hypothesis as a route to comprehending state-society power relations expressed through water resources control patterns. On closer examination, I argue that the content of Wittfogel's work appears rather more nuanced, non-deterministic and complex than has often been alleged by critics, and may be worthy of a reappraisal of its value in contemporary contexts. Thus, taking into consideration some of these distinctions made by Wittfogel about hydraulic society typology and on the basis of Evers and Benedikter's (2009a) contentions concerning the importance of strategic groups involved in maintaining control over a modern day hydraulic society, rather than simplistic binary distinctions between homogeneous villages and a monolithic state, could provide helpful concepts to consider for the case of Thailand. This is based on a contention that Thailand exhibits some basic characteristics that led Wittfogel (1957) to identify it as a hydraulic society, and later hesitantly seconded by Wijeyewardene (1973). The foregoing discussion of the weaknesses and merits of the hydraulic society thesis leads on to a consideration of related issues for conceptualizing social relationships of water, state, politics and development, framed under the rubric of the "hydraulic mission" (Allan, 2002).

2.3 The Hydraulic Mission notion

Updating elements of the Wittfogelian theory to a modern context, a recent issue of Water Alternatives (www.water-alternatives.org) contained a themed issue titled "Hydraulic Bureaucracies: Flows of Water, Flows of Power", that placed a primary focus on the role and power of state water bureaucracies (hydrocracies) in securing

³² These were listed as Compact 1, Compact 2; Loose 1; and Loose 2 types. Price (1994) maintains that Hunt (1988) neglects these key hydraulic density variables of Wittfogel, and thus constructs a straw man to demolish.

control over “space, water and people and an important part of everyday forms of state formation” as part of an intentional political strategy (Molle et al., 2009d:328). The authors contend that the twentieth century trend towards increasing large-scale water resources development, including vast irrigation works, was “anchored in 19th century scientism and an ideology of the domination of nature, inspired by colonial hydraulic feats, and fuelled by technological improvements....” (Molle et al., 2009d:328). They point out that this massive expansion in hydraulic works by governments was enthusiastically adopted by governments North and South, East and West, and term it the “hydraulic mission”³³, entrusted to the powerful hydrocracies for discursive and material implementation. The synthesized paper highlights several key defining discourses associated with the motivations and worldviews of hydrocracies which can be summarized as comprising the following ingredients: a/ demonstrate an enthusiasm for “scientific irrigation”, as befits the professional bias of the civil engineers inhabiting them; b/ uphold an associated hubristic view of the domination of nature; c/ convey a utopian fascination with the vision of making deserts bloom; d/ associate irrigated farming with civilization itself and a moral ideal of farming, and; e/ often entertain biblical/messianic overtones to prompt calls for creating new Edens in dryland environments (Molle et al., 2009d).

In line with the civilizing, moral and religious tones in which new irrigation schemes were justified during their inexorable spread into newly colonized lands in the western states of the United States (Reisner, 1986; Worster, 1992) and numerous nations of the global South. Molle et al. (2009d) document the emergence of the hydraulic mission in numerous locations and political regimes, from nominally communist to fascist to democratic states, and note the bureaucracies established to expedite it had their “secular priesthoods” to expedite the “irrigation gospel”. Echoing Wittfogelian notions of centralised state control over space, water and people, Wester et al. (2009:395), note that the rapid expansion of irrigation infrastructure precipitated by the hydraulic mission during the early twentieth century, “literally built the state and deepened its control over territory and people.” The hydrocracies are recognized primarily as representing, “the creation of nation states and reflect a number of their concerns and objectives”, and may

³³ Wester et al. (2009) emphasize the apposite nature of the term “mission”, due to its military and religious connotations and as a reflection of the state’s conviction in its duty to develop water resources.

simultaneously possess unique sets of interests and ideologies (Molle et al., 2009d:336). Ultimately, the power and legitimacy the hydrocracies hold is dependent on promoting and sustaining an endless cycle of planning and construction of water resources infrastructure. Maxims such as “not a single drop of water should reach the sea without being put to work for the benefit of Man”³⁴ were no doubt sincerely held in the growing hydrocracies, often working in tandem with politicians and national leaders (Molle et al., 2009d). Describing the process of socio-natural transformation that occurred following the creation of a hydraulic mission in the nineteenth century by authoritarian public authorities in Spain, Swyngedouw (1999:460) asserts, “[I]t is the maelstrom of tensions and contradictions that weave the material, discursive, ideological, and representational, together in often-perplexing, always deeply heterogeneous, collages of changing and shifting positions of power and struggle that decisively shaped the production of the Spanish waterscape over the next century.”

Regarding the power of hydrocracies, often correlated with the size of annual budgets allocated, Thailand is cited as providing a good example of water departments holding on their shelves multiple master plans which incorporate “projects penciled in to dam every single river that lends itself to dam construction, linked to the attendant development of irrigation areas (or where it is not the case, to flood control or hydropower objectives)” (Molle et al., 2009d:336). At the same time, the authors recognize that it is not only the interests of hydraulic bureaucracies and the governments they serve that shape water resources development pathways, but also identify four other categories of powerful actors involved; namely politicians, construction companies, landed elites and development banks. They argue, “[W]ater bureaucrats, state-level and local politicians, water business companies, and development banks are often tightly associated in ‘synergetic relationships’ whereby the ways of flows of water are created or modified by water infrastructure are intertwined with flows of power and influence, often manifested in the form of political or financial benefits, whether private or collective” (Molle et al., 2009d:336). As a result, there is often collusion between private business, politicians and bureaucrats to create “iron-triangles” in the US, or in the global South, “iron

³⁴ Molle (2006) found that similar statements can be traced to leaders of numerous countries, irrespective of ideology and faith.

rectangles” with the addition of development banks’ interests (see Molle et al., 2009b). The combination of vested interests may often utilize such practices as bribery, bid-rigging, exchange of favours, benefit overestimation and cost neglect in order to keep a steady supply of infrastructure projects flowing, and facilitating a “lending culture” in contexts where there are rarely sanctions for failed projects. Therefore, it would be interesting to determine and elaborate during the course of this study, if Thailand fits a model that reflects most accurately a triangle, a rectangle or some other formation of actor groupings benefitting and promoting the hydraulic mission to further their interests and the discourses adopted in that process.

The discussion thus far has identified some of the core theoretical literature used in conceptualizing the politics of water resources development and management, with a special emphasis placed on issues related to Southeast Asia. I now turn to examine different approaches through which the hydraulic development paradigm has been conceived in the Mekong Basin, from socio-political and socio-ecological perspectives. This is an attempt to provide the reader with a sense of where irrigation development, as a technology, social practice and discursive object sits in a wider scholarly interest in historical hydro-politics and water control in the Mekong region, which may assist in better understanding the specific context of Northeast Thailand’s hydraulic-development.

2.4 Hydropolitics in the Mekong Basin

In recent decades, there has been a marked growth of academic research interest in a loosely defined “hydropolitics”³⁵ of the Mekong Basin and wider region³⁶ as an explanatory framework for understanding national and transboundary water conflicts (e.g. Ojendal, 1995; Hirsch, 1998; Bakker, 1999b; Goh, 2004; Onishi, 2005; Backer,

³⁵ This term was first coined by Waterbury (1979) in his book, *Hydropolitics of the Nile Valley*, has mostly been adopted by political scientists, environmental economists and hydrologists to analyze contexts of growing water scarcity and the risks it poses for degeneration into potential conflict, principally at the transboundary or inter-state level.

³⁶ Whereas the Mekong Basin comprises a distinct hydrological unit, the Mekong region is a larger geographical construct, used to describe the countries of peninsular Southeast Asia that border the Lower Mekong River, namely Burma, Cambodia, Lao PDR, Thailand and Vietnam, plus Yunnan province of China. Dore and Lebel (2010) point out that “many Mekongs” exist in the perceptions of different stakeholders, whether as a river, as a basin or various regional geo-political framings.

2006; Sneddon and Fox, 2006; Sneddon and Fox, 2008; Ojendal et al., 2012; Ojendal and Morck Jensen, 2012). There are three main issues I wish to draw attention to within this body of literature. Firstly, it has primarily focused on the politics of hydropower development, in preference to (and possibly at the expense of) considering more deeply other forms of hydraulic development such as irrigation or flood control works; secondly, it has tended to be rather scale-bound at the Mekong regional or transboundary levels, despite some attempts to counter this trend and reduce the analysis to sub-basin, sub-national levels or local levels; and thirdly, it has placed most emphasis on studying the role of nation states, international development organizations (especially the Mekong River Commission) and transnational corporations as the pre-eminent actors in hydro-politics, to the detriment of a more inclusive and nuanced view of a wider range of relevant sub-national actors and groups (see Dore, 2003; Hirsch and Morck Jensen, 2006).

Regarding the first point of a sectoral bias in research, it seems hydropower development has most frequently been at the centre of regional debates over water and politics, with the energy sector being regarded as a prime driver of regional economic development (Hirsch, 1998; Greacen and Palettu, 2007; Middleton et al., 2009; Ojendal et al., 2012). The domination of hydropower development concerns in governance debates and academic literature has possibly been at the expense of considering conflicts around other hydraulic infrastructural sectors such as irrigation development and flood control. Hydropower development has tended to dominate discourses surrounding intra-regional and international contestation and cooperation for several decades, broaching a significant milestone recently following the bi-lateral decision by the Laos and Thai governments to jointly develop the mainstream Mekong River³⁷ without the apparent full consent of the Cambodian and Vietnam governments, occurring amidst widespread civil society opposition and expressions of concern from Hillary Clinton (Fawthrop, 2012; Ojendal and Morck Jensen, 2012). For example, Bakker (1999b:228) stated that, “insofar as dams assume an emblematic role in debates over water resources management, an examination of hydrodevelopment can shed light on debates over environment and development more generally.” The majority of her paper on “hydrodevelopment” is actually

³⁷ In September 2012, the Thai company Ch. Karnchang was reportedly moving ahead quickly with construction of the Xayaburi Dam, a highly controversial \$3.5 billion hydropower dam project which plans to export 95 % of power generated to Thailand (Fawthrop, 2012).

focused on discourses of hydropower development, and treats it apart from other forms of hydraulic infrastructure, rather than part of the same pattern of a general “hydraulic mission” in the basin. She believes that hydropower development at any scale operates primarily as a means of commodification and simultaneously as a way of extending state control into peripheral areas in a deliberate strategy of “territorialization”³⁸, with the incursion of private capital becoming central to causal explanations. But the possibility of irrigation development fulfilling the same functions as hydropower seems to have been overlooked, perhaps unwittingly reinforcing a widespread belief that the benefits of irrigation primarily accrue locally (Shivakoti et al., 2005). Hence, hydropower development may be viewed as a socially exclusive, impersonal or coercive symbol of state authority for some critical scholars, while by comparison irrigation infrastructure somehow tends to retain an image as a more benign, inclusive and softer technological intervention in the hydrological cycle, which may partly account for a relative lack of critical research into societal power relations and irrigation development.

The second and third issues concern notions of scale and a tendency for much of the Mekong basin’s hydro-political discourse to be preoccupied with regional and national level narratives, often at the expense of more localized or sub-national narratives and actors. The inter-linked concepts of scale and power in water resources development has been addressed by several other regional scholars in the context of the Mekong Basin (Sneddon, 2002; Sneddon et al., 2002; Sneddon, 2003b; Hirsch and Wyatt, 2004; Lebel et al., 2005) and Thailand’s Chao Phraya Basin (Molle, 2006, 2007a). Critiquing an apparent pre-occupation by much of the academic literature on international river basins concerning the principle of “cooperation” (e.g. the international scale of negotiations, transnational institutional arrangements, international legal principles and water allocation goals) as an analytical category and normative objective, Sneddon and Fox (2006:182) argue that this “obscures the ways in which states, non-state actors and river basins themselves interact to construct ‘transnational’ basins through institutional and material processes.” Cooperation in and of itself is not seen as a desired end for riparian

³⁸ Territorialization has been defined as “the attempt by an individual or group to affect, influence or control people, phenomena and relationships by delimiting and asserting control over a geographic area” (Vandergeest and Peluso, 1995).

governments in the basin as such, but rather a means for proceeding with the accelerated *development* of water resources.

Taking the highly contentious and emblematic example of the Pak Mun Dam in lower Northeast Thailand as a sub-national project with transboundary dimensions, Sneddon and Fox's (2006) paper emphasizes the importance of examining conflicts over water resources that do not involve studies of struggles or cooperation mechanisms between riparian *states* per se in transboundary river basins, conventionally used in analyses of regional water governance. Instead they call for cross-scalar analyses of Mekong water conflicts that may involve state agents (e.g. dam-building agencies, irrigation departments, environmental agencies) and non-state actors (e.g. communities affected by water development projects) over specific interventions to alter river systems. They note two current conceptual "blind spots" that deserve to be addressed: "1/ clarifications of how and why development agents (e.g. riparian states) have discursively engineered transboundary basins into spatially fixed entities; and 2/ the complex interactions among different scales of conflict within basins' socioecological dynamics" (Sneddon and Fox, 2006:183). The same authors advocate a "critical hydropolitics" framework, which they maintain, "help to reveal barriers – discursive, political, and institutional – to sustainable governance and meaningful participation" of all stakeholders in water resources management, while inherently recognizing the power relations that underpin the depoliticized discourses of development and cooperation (Sneddon and Fox, 2006:198). A similar conclusion was drawn by Kakonen and Hirsch (2009) in relation to revealing forms of development-driven participation promoted by the Mekong River Commission (MRC) and certain state agencies, that are argued to "contribute to the depoliticization of knowledge in support of a particular governance agenda", which inevitably leads to the justification of large-scale hydraulic infrastructure (see Section 2.5 below for further discussion of this process).

Water resources development contestation is but one of several inter-linked environmental conflict issues (e.g. forest degradation, land rights, industrialization, etc.) that appears to have become progressively politicized in the Lower Mekong Basin over recent decades through being "fixed" at a certain discursive scale by actors supporting particular ideological views (Hirsch, 1997; Molle et al., 2009b). Dore and Lebel (2010) underline the tendency for actors to privilege certain spatial

or temporal scales and levels in their analysis, arguments and responses, thereby increasing resource contestation. Reinforcing Swyngedouw's (1997) contention that "the circulation of water is embedded in social power relations", Sneddon (2003b:2230) argues that the manipulation of water through large-scale inter-basin transfer projects reveals linkages not only between water and "circuits" of state power, but also how the economic and political processes that transform river basins – both discursively and materially – will tend to "constantly rework the politics of scale through the extension and contraction of networks and non-humans."³⁹

Sneddon (2003b) further notes the infrequency with which most academic literature dealing with notions of power have broached questions of ecology or the natural (i.e. non-human) sphere, while showing a marked pre-occupation with the social and technological realms. The same observation could be made for much of the critical socio-political work on irrigation development, where non-human entities have been largely obscured as agents. Sneddon (2003b:2246) suggests that political struggles concerning the trans-basin Khong-Chi-Mun (KCM) Project⁴⁰ in Northeast Thailand and local nodes of conflict at specific dam sites are, "largely about maintaining the set of relations among Thai political agents and development agencies that confer the KCM project its power effects and capacity to reach across scales." Sneddon (2000:341) earlier argued that large-scale water resources development is predominantly an activity of the state, as "the single most powerful environmental manager with regard to influence over how resources within the Thai national territory is accessed and used". It followed that inherent contradictions were exposed when state agencies were appointed mediators in resulting conflicts over water resources control and access, with Sneddon perceiving the state's primary motivation being economic development and capital accumulation. Sneddon acknowledged that it was not only state bureaucracies, but also "affiliated institutions" (such as politicians, business interests and international development agencies) that become "privileged actors" in the control and development of water resources. He identified a wide actor network that included a number of social and natural entities that were recruited into determining the project's evolution, either in support or opposition. It

³⁹ NB: The "politics of scale" metaphor is explored further in a section on scale issues in Chapter 3, Section 3.2.9.

⁴⁰ This pan-regional irrigation project was first proposed by powerful state actors for implementation during the early 1990s, although its roots go back much further, and has only ever been partially and unsuccessfully realized on the ground (refer to Chapter 6 for further detail).

is these “affiliated institutions” that may be interpreted as equating to the “strategic groups” in Evers and Benedikter’s (2009b) study and are of particular interest to my own in identifying those that determine control over water resources and discourses used.

2.5 A social ecology of water resources

Are there any alternative approaches to the national-centric “hydraulic mission” focused approaches and the trans-national and trans-basin oriented Mekong hydropolitics literature for developing better understandings of state-society-water interactions and discursive justifications for irrigation development paradigms at more local strata in society? One promising alternative could be the theoretical and empirical approaches applied in India by social anthropologist, David Mosse (1997a, 2003, 2007), through impressive explorations of the changing ecological, political and cultural significance of water within communities utilizing tank irrigation systems in Tamil Nadu state. Rather than focus primarily on the national and regional political processes and discourses, he concentrates his analysis on the role of water, as a productive and symbolic resource, at the sub-basin and community levels. He argues in *The Rule of Water: Statecraft, Ecology and Collective Action in South India* that water forms a key part of the construction of social identities and political domains: “[T]he connections and interdependencies of hydrology interweave with those of caste and kinship, business and politics, and generate distinctive patterns of co-operation and conflict..... Water flows have not only shaped social and political institutions, they have also legitimized them. Medieval kings and chiefs controlled and gifted water flows, creating landscapes which inscribed their rule into the hydrology and thus naturalized it” (Mosse, 2003:4). Baviskar (2005) too notes a watershed mission (perceived as a similar concept to the hydraulic mission, but combines water and land management) in India, that is embedded in and a product of, landscapes “saturated with power”. By the same token, irrigation development in Thailand could be viewed as both an ideology and discourse that, to quote Baviskar (2005:282), enables “an assemblage of practices that are part of a project of rule”.

As part of his analysis, Mosse (2003) reasoned that two dominant historical models of irrigation development have influenced scholarly debates over the past century. The first referred to Marxian themes elaborated by Wittfogel (1957) of centralized power, agromanageerial bureaucracy and extractive land taxes under a hydraulic (despotic) state built around large-scale irrigation technologies. The second stressed the autonomous role of small “village republics”⁴¹ (e.g. Wade, 1988) and their assemblies, where the irrigation technology and practice is regarded as socially complex, indigenous and independent of the state, such as studies by Leach (1959) and Geertz (1959, 1980). Both models of representation are argued to be constructions that barely conceal “contemporary ideological agendas” and Mosse believes neither can be sustained for understanding irrigation in India. While Wittfogel’s “hydraulic despotism” was dismissed as a “thinly disguised and politically understood warning against the dangers of state socialism and modern totalitarianism”⁴²; on the other hand, the “village republics” narrative was first adopted as part of the discourse invoked by colonial governments, but later popularly usurped, “as a trope in the critique of the modernizing development strategies of the centralized state and the dominance of Western technical engineering over indigenous community perspectives in irrigation” (Mosse, 2003:57). However, in dismissing Wittfogel’s contributions to some of the very issues he claims most interest in (i.e. the power and political economy aspects of irrigation expressed in the rule, rather than the management, of water), it appears that Mosse neglects to reflect on the wider tenets of “hydraulic society” theory for assessing elements of contemporary Indian statecraft and rule of water beyond the local through top-down, trans-basin grand irrigation schemes⁴³ and myriad other coercive hydraulic infrastructure developments of the last half century or so.

⁴¹ This term refers back to Gandhian notions around self-sufficient, relatively state-independent villages in India, that has subsequently been adopted as a popular theme by scholars of commons management regimes, such as Wade (1988), who argued that the relative economic value of a scarce resource drove users to form village-based collectivities and jointly manage irrigation water systems.

⁴² I find it interesting that Mosse (2003) only refers to Wittfogel thrice in the whole book, apparently basing his critique on the second hand interpretations of hydraulic society theory by others who are equally dismissive of Wittfogel, as has been the tendency of many other social anthropologists in the past.

⁴³ For example, India appears to be pressing ahead with plans to execute a vast inter-basin water transfer engineering scheme, that would take water from the water “rich” areas to the water scarce parts (see the National Water Development Agency (under the Ministry of Water Resources) website - <http://www.nwda.gov.in/index.asp?langid=1>, Accessed 14 March, 2012) and is the third greatest

Mosse (2003) maintains that based on polarized notions of state and community, the two models leave little possibility for change or for understanding irrigation development in a local context of tank irrigation practiced in a complex and unstable ecological landscape. He proposes moving beyond the dual models identified to incorporate a more contextually aware account that takes into consideration questions of power, culture, history, ecology and technology as they relate to water resources management. In doing so, he advocates for adopting a “social ecology of water” approach which views environment and society as mutually adapted categories, to show “how water control systems come to inscribe new forms of power and new articulations of state and society” (Mosse, 2003:7). Mosse (2003:84) makes the argument that tank-irrigated paddy cultivation “provided a medium through which social relations of state and society were articulated and symbolically represented. Tanks were already part of a pre-colonial nostalgic ideal social order – however incompletely realized – and every bit as rooted in the exercise of power as later colonial and orientalist representations of the village community.” By demonstrating that contrasting local ecologies are historically produced rather than simply given, both Mosse’s (1997b, 2003) and Worster’s (1992) conceptual framings of society-ecology interactions demonstrate distinct theoretical similarities, albeit set across vastly different spatio-temporal scales and socio-cultural contexts. It suggests that a social ecology of water approach could be usefully applied in other contexts, where potentially modern powerful actors, rather than ancient, “kings, warriors and earlier forms of state” are in the process of inscribing their marks on contemporary landscapes currently undergoing the process of being transformed into irrigated waterscapes⁴⁴, such as in Thailand where the documented history of water resources management lacks the rich detail of India and remains more open to historical interpretation.

large dam building nation on earth, after China and the United States (World Commission on Dams, 2000).

⁴⁴ While there are ancient Khmer archaeological ruins located throughout the Northeast of Thailand, including in the Nam Songkhram Basin, the majority of reservoirs (or “tanks” in Mosse’s terminology) found in the region are not old structures as in Tamil Nadu, but have been built within the past half century by state agencies.

2.7 A Political Sociology of Water Resources Management

Reinforcing Mosse's (2003) view that there is often a polarization of academic strands in agricultural water use in the case of India, Mollinga (2010) proposes that despite its vibrancy and intensive public debate and action, it has led to surprisingly little shift in agricultural water governance and policy, suggesting a deadlock situation has arisen. He points out some of the relevant dichotomies to critical water scholarship such as nature-society, global-local, modern-traditional and state-village, that can lead to "strategic essentialisms" (Baviskar, 2005) or analytical reductionisms in research, implying one-dimensional abstractions from complex realities (Mollinga, 2010). Reality is not bipolar or dichotomous, but complex, leading to the fallacy of binarism in analysis. Mollinga (2010) recognises how social ecology orientations of agricultural water use have been helpful in moving beyond a straightforward political economy perspective and some overlap with political ecology approaches to establish a relationship between nature and society, without always theorizing that relation.

Mollinga (2008) too accepts the general proposition that water resources management is inherently political, but acknowledges that within mainstream water policy discourse that this is not a commonly held perspective and has to be established. As he states, this proposition "is based on the idea that *water control* is at the heart of water resources management and should be conceived as a process of *politically contested resource use*" (Mollinga, 2008:10, emphasis in original). Water control⁴⁵ thus becomes the subject matter of water resources management⁴⁶.

Mollinga (2008:11) goes on to advocate for the establishment of a new field of scholarship within water resources, namely a "political sociology of water resources management", where the "sociology" in the rubric refers to the "social embeddedness" of water resources management, which is viewed as "a practice in which water and agency 'meet' to reproduce and transform society....". The two

⁴⁵ Mollinga (2008) posits alternative terms such as water guidance, direction or regulation as being potentially better, as far as describing what humans physically do in intervening in the hydrological cycle, but accepts the other terms are more awkward and confusing as general categories and so sticks to "water control". Further explanation of the concept of water control as it relates to this thesis is provided in Chapter 3.

⁴⁶ Although Mollinga does not specifically mention it, I assume "water resources development" (my principal interest in this thesis) to be a category subsumed under an all encompassing "water resources management" rubric.

main forms of embeddedness he identifies are context (i.e. water resources management in relation to other structures and practices) and of history (water resources emerges from somewhere along a certain trajectory). In a footnote (13), Mollinga (2008:11) reasons that an embedded study of contested water resources management would simultaneously have to incorporate aspects of political ecology, political economy and a political sociology; illustrating the broad multi-disciplinary umbrella of this new field. Operationalizing such a project into one's research calls to mind Mosse's (2003:1) opening line in *The Rule of Water*, "[t]he relationship between water and society is as complex an historical, sociological, and regional problem as any that can be imagined" and one can only ever expect to produce a partial, incomplete, situated and constructed account of a far more complex reality.

2.6 Ideological irrigation development

I lastly turn to the central issue of water resources control *as* ideology. Mosse (2003) recognized that indigenous water harvesting discourses were ideological, whether expressed through environmental narratives or discourses of irrigation devolution and public sector reform. Significantly, he pointed out, "to argue that village water traditions are ideological does not deny their existence" Mosse (2003:13). Before moving on to the specifics of Thailand, it may be helpful to ask what other precedents exist for making a claim that irrigation development may embody ideological dimensions and under what kind of historical, ecological, social and political circumstances have they been theorized?

Links between irrigation development and ideological underpinnings are not unprecedented, based on an examination of a broad water resources literature, one can find claims of inherent ideological elements being important drivers of development drawn in several contexts, including Australia, parts of sub-Saharan Africa and Israel. Taking the case of Australia first, Hamilton-McKenzie (2009) examined the pioneering drive for irrigated agricultural development in the Murray-Darling Basin during the late 19th century, and concluded it was partly based on what she termed an "Irrigationist Philosophy", strongly inspired itself by the irrigation colonies of California. This philosophy was categorized according to three main

components, the first being an attractive and civilized yeoman farmer ideal; secondly, the technologically progressive and scientific nature of irrigated farming over broad-acre farming; and thirdly, fulfilling a God-given mission of transforming wild, barren and dryland landscapes into well-ordered, green and productive land tracts. The irrigationist vision was expounded in a “Red Book” commissioned by a pair of Canadian brothers (the Chaffey) who founded the first irrigation settlement and sought pioneer farmers from Britain and the United States to buy, emigrate and cultivate the remote land. Through this ideological treatise was produced to support an hitherto untested technology and although strongly contested at the time, once stamped with government authority, “the irrigationist movement was given a tradition, a sense of historical trajectory, which caught the readers in a sense of destiny” (Hamilton-McKenzie, 2009:35). The same ideology still dominates contemporary Australian land developers’ attempts to transform the landscape and the old Red Book dreams recur entrenched in beliefs about the progressive nature of technology, more recently tied to irrigation efficiency discourses. Yet, argues Hamilton Mc-Kenzie (2009), the legacy of the irrigationist philosophy can be considered a patent failure, on environmental, economical and aesthetical grounds.

The second example relates to northern Nigeria, where Adams (1991) identified an irrigation ideology having influence (he labels it “irrigationism”⁴⁷), characterized by a modernizing vision offered by large-scale irrigation, regarded by powerful actors as a “technofix” solution to the challenges of drought and the economics of a conservative and independent peasantry. He regarded it as a “remarkably coherent ideology” that was able to draw on a number of sources for its legitimacy, including “views of the nature of development as transformation and modernization” and embraced the notions entailed in a supposedly apolitical and technically advanced “Green Revolution” route to development (Adams, 1991:297). Referring to Moris’ (1987) notion of irrigation as a “privileged solution” and the primacy of “blueprint” approaches (Moris and Thom, 1990) to planning, Adams reasoned that irrigation-

⁴⁷ This term has also been used in a slightly different context by Bruce Lankford to refer to a rather narrow, ‘fixed’ way of going about improving irrigation with irrigation-based production and individual irrigation systems at its centre. *Irrigationism* is portrayed as a rigid and dogmatic ideology of pursuing irrigation-based solutions for agriculturalists in developing countries. Lankford contrasts *irrigationism* with *irrigationality*, which is painted as a far more flexible and pragmatic ideology for pursuing irrigation development. The latter term implies a more context-cognisant, conditional, cautious method of progressing towards irrigation-based livelihoods, situated within complex river basins and economies. (Lankford, personal communication, 2010)

based development was widely promoted by various international organizations and academic institutions as a popular solution to perceived problems of drought and food shortages in the 1970s. The messages delivered by the irrigation development experts fell on fertile ground with the indigenous elite of Nigeria, drawing in businessmen, politicians, technocrats and bureaucrats who were positioned to profit from the investment. That the promotion of and investment in irrigation development continued for decades, even in the face of poor performance at all phases of the project cycle from planning to operation, “owes something to the capacity of those technologies to blind policy-makers to their limitations and high costs”, argues Adams (1991:298). Elsewhere, Adams (1992, 2001) has shown that irrigationism has not only been a feature of Nigerian development thinking and practice, but has been a powerful ideology elsewhere in Africa too, including Kenya and Tanzania.

A further context in which irrigation development and ideology have been closely associated is the state of Israel. Lipchin (2007) has outlined how the agricultural and water policy of Israel has been heavily influenced by Zionist ideology since the state’s formation. He claims that Zionism aided the state in instituting policies that favoured the continual expansion of agriculture through land settlement, and by extension, water development projects for irrigation in an effort to create a neo-Garden of Eden in the arid landscape, referred to by Molle et al (2009d) as a “let the desert bloom” utopia common to some countries in the Middle East and the western United States. Lipchin (2007) argued that, “an ideology has developed around water by virtue of its association with agriculture”, as agricultural activity was central to the goal of returning the land to the Jewish diaspora. For example, this ideological mission was clearly stated by Ariel Sharon:

“.....water is not merely an economic resource but a means of settling the periphery, protecting state land and a means of conserving farmers and farming.”

Ariel Sharon, Israel’s Prime Minister, Ha’aretz Daily Newspaper, April 19, 2001 (cited in Lipchin, 2007:251)

Thus, through a systematic process of territorial expansion and consolidation that extended above and below ground to also include aquifers, all water resources became state property under a highly centralized system of water management, allocation and development. Furthermore, due to the ideological nature of water resources development, he believed that there was “little practical, economic or

environmental value in terms of its relation to the physical nature of an arid and water scarce environment” (Lipchin, 2007:255), and further, the policy has left a legacy of mismanagement and environmental degradation. He finishes by noting that changing such ideological values clustered around water resources would be a daunting task, as a survey of local perceptions found there was a strong correlation between national policy making and local value systems. Expanding on reasons for societal resistance to change in water allocation to the agricultural sector, even when it is divorced from economical rationality Kartin (2001:277 *nb. emphasis added*) explains that it “is linked, *primarily*, to cognitive difficulties that stand in the way of reforming ideological symbols about agriculture in Israel. This difficulty stems from the fact that agriculture is associated with a broad set of moral, ideological and social ideas.”

There is one further instance of irrigation-linked ideology I wish to draw attention to, which although it does not appear to have been academically recognized as such yet, I believe it represents both a geographically and culturally pertinent case to Thailand, as an extreme example of an irrigation developmental ideology promoted within a “modern” hydraulic society, that goes well beyond the instances raised thus far. I refer to Thailand’s eastern neighbor, Cambodia or Democratic Kampuchea, as it was officially known during the repressive and violent Khmer Rouge-led government which lasted between 1975 and 1979. “There has never been a modern regime that placed more emphasis and resources towards developing irrigation”⁴⁸, states Himel (2007:42), with practically the entire population put to work digging irrigation canals and dikes and rice planting activities. A central goal of the regime during its tenure was the (re)construction of nationwide irrigation systems, in an attempt to construct an ideal socialist environment, where “the daily life in the collective and personal necessities were planned down to the very last detail” (Bultmann, 2012:40). Pol Pot’s monumental irrigational plan, articulated in his “Super Great Leap Forward” policy, was to increase rice yields three-fold on all agricultural land and to increase the area under irrigation from 74,000 ha to 1.5 million ha in the matter of a few years. In a rigidly deterministic manner and under a collectivized property system, the regime set about building large irrigation schemes across the country according to a

⁴⁸ Describing the Khmer Rouge as presiding over a “modern regime” is somewhat ironic, as their stated aim was to turn the calendar back to Year Zero and create a utopian agrarian society, based on communal peasant labour.

landscape-independent grid-pattern network of canals and roads, laid out following 1:50,000 topographical maps (see Fig 2.1 below). Dams, dykes, embankments, pumping stations and hydraulic control systems were constructed on river floodplains to divert water into the reservoirs and irrigation canals using a *corvée* system of mass enforced labour⁴⁹. Once an irrigation system was complete (most of them were never completed), the state dictated almost every minutiae of production (e.g. rice variety, planting time, fertilization regime, irrigation schedule, etc) and relayed this through a system of party cadres to the collectivized workers on the ground⁵⁰. Bultmann (2012) argues that this deliberate irrigational strategy by the regime was designed to tighten control over the populace, “create” loyal subjects of the people, and tame a “deviant space” by inscribing power relations into the landscape (cf. Mosse, 2003). Perhaps utterly predictably under such a draconian system of control, even as the area of irrigation increased greatly, the rice yields declined rapidly as the systems collapsed both literally and figuratively (Himel, 2007).



Fig 2.1 The official national emblem adopted by the government of Democratic Kampuchea (1975-9), illustrating the centrality of notions of orderliness and control over nature associated with rice-based irrigation, industrial modernization and water control for the regime's symbolic self-image

(Source:
http://en.wikipedia.org/wiki/Democratic_Kampuchea
 Accessed on 23 September 2012)

Thus, to briefly summarize the cases raised of ideologically-based irrigation development, in Israel there would appear to be a distinctly quasi-religious and nationalist dimension to the official ideology of irrigation development and its associated state-centric hydraulic mission to make the “desert bloom” (Kartin, 2001;

⁴⁹ Perhaps coincidentally, about the same time (i.e. 1975-76) under the government of M.R. Kukrit Pramoj, villagers in Northeast Thailand were being exhorted by the state to form working parties to build weirs, dig embankments and canals by hand to supposedly increase irrigated rice cultivation. The remains of these earthen structures (known as *fai Kukrit*) can still be seen across the landscape today (often abandoned) as a physical reminder of past state irrigational efforts to simultaneously control people and water.

⁵⁰ During the 44 months of Pol Pot’s leadership, a reported 1.7 million people died of exhaustion, disease and starvation, or were brutally executed, many of whom had been forced to toil in the creation of an irrigation-based utopian state.

Lipchin, 2007); in Australia an “irrigationist philosophy” was closely related to a pioneering vision of arid land transformation inspired by American-born dreams of conquest over nature; whereas in African states like Nigeria, irrigationism provided justifications for an idealized technocentric, modernist vision of development reproduced amongst both exogenous and indigenous elites, and borne out in largely failed irrigation schemes imposed on the periphery (Adams, 1991, 1992); in southern India, an ideology privileging indigenous water harvesting techniques is supported by environmentalist, traditionalist and localist narratives on one hand and an overlapping agenda provided by a discourse of devolution of water resources management to local communities; while in the final case during the four year Khmer Rouge era in Cambodia, a utopian irrigation-based ideology mixed with virulent nationalism and socialism was pursued to genocidal extremes (Himel, 2007; Bultmann, 2012). Such examples provide a rich source of material for future further study and possible comparison, although I would argue that each national case and context are likely to be unique and I shall not attempt to make direct comparisons, until the later stages of the thesis.

2.7 Main Research Question

This research takes as its starting point the contention that Thailand represents an example of a modern day hydraulic society, characterized by strong centralization of authority in water resources decision-making, and that this conceptual phenomenon can be partly explained by an ideological formation around irrigation development, referred to as “*irrigationalism*”. Acknowledging the socially contested and political nature of hydraulic development, this thesis is primarily interested in exploring the discourses (and their constitutive narratives), actors (and actor groupings) and material practices that drive *irrigationalism*, so will be guided by the following overarching research question, which is suggested to lie at the heart of the research problem concerning the underlying drivers of irrigation development in the specific context of Thailand.

“What are the discourses, actors and practices that drive *irrigationalism* in the context of Thailand, cast as a modern hydraulic society?”

2.8 Summary

The literature review has attempted to locate this thesis within a wider corpus of scholarship regarding water and state-society relations to establish an initial broad theoretical context. It has been primarily concerned with providing the reader an overview of Wittfogel's (1957) hydraulic society hypothesis and some key debates surrounding it, critically examining some key arguments of detractors and supporters within the context of mainland Southeast Asia. It finds that the tenets of the theory remain relevant to the modern context, perhaps more so given the level of irrigation infrastructure that has been completed since its publication and supporting Mitchell (1973), Price (1994) and Worster's (1992) arguments, much of his work has been overlooked or misrepresented. In this regard, Wittfogel's distinctions between hydraulic and hydroagricultural societies and the size and density of hydraulic works are important facets to consider. Therefore, this chapter has argued for a re-interpretation of the hydraulic society hypothesis and its relevance to the case of Thailand, engaging with the implications of Wijeyewardene's (1973) contention and possible reasons for its neglect. When coupled with the highly evocative notion of the "hydraulic mission", the hydraulic society hypothesis may provide a potentially useful means of theorizing irrigation development paradigms and state-society power relations for certain mainland Southeast Asian societies, although both concepts require further unpacking along with the actors, groups and discourses that sustain them (Molle et al., 2009d).

Thus, critically exploring aspects of societal water control politics and power relations will be primary concerns of this thesis, in parallel with a close scrutiny of the various underlying or non-material drivers of irrigation development in Thailand (led by the notion of an ideology of irrigation development or *irrigationalism*, expanded upon in Chapter 5) and their role in influencing discourses, processes and practices at different scales. As such, the thesis will draw on an eclectic range of literature that will be inter-disciplinary in scope and treat irrigation as a social object that invokes both discursive and material dimensions in its study to address the main research question posed. While it will inevitably fall short of the complexity of analysis called for in Mollinga's (2008) political sociology of water resources

management, it adopts this general framework in combination with critical political ecology approaches as starting points to the methodological approach. The next chapter lays out the methodological concepts, tools, and analytical methods through which this thesis tackles the complex task.

Chapter 3 Conceptual Framework

3.1 Theoretical points of departure and key concepts

This thesis is primarily concerned with the exploration of issues related to the underlying socio-political drivers of irrigation development in a developing country context, which explicitly acknowledges the contested nature, complexity and multi-actor plurality of water resources development and control. Essentially the study adopts a semi-inductive approach, with theory emerging from the conduct of empirical research, in other words, post data collection during the analytical process. From an initial orientation during the research formulation phase of being primarily concerned with determining socio-ecological explanations for deteriorating terrestrial and aquatic ecosystems in Northeast Thailand, linked to expansion in irrigated agriculture, I gradually shifted the focus of my attention towards conceptualizing irrigation development as a politically contested social practice and became more interested in understanding the links between irrigation development, politics and societal power relations, that aligned more closely with post-structuralist methodological premises. During the iterative research process, I began to recognize that the categories normally ascribed as being “environmental problems” related to irrigation development, including poorly conceived, planned and executed systems and resultant negative externalities on ecosystems, should more correctly, be viewed as “socio-political problems” with environmental manifestations. Hence, this study views nature/environment and society as being mutually constitutive categories, following authors such as Castree and Braun (1998), Mosse (2003), Peet and Watts (2004) and others; thus rejecting the common dualism forged between humans and nature, as essentially a false, socially constructed dichotomy⁵¹. This ontological perspective has implications on how social objects like irrigation systems are conceived in the thesis.

⁵¹ Other dichotomies or binary distinctions commonly used in sociology that this thesis rejects as largely unhelpful concepts in understanding the underlying issues related to a better understanding of irrigation development in the Thai context, might include micro-macro; agency-structure; and individual-society dualisms. For a broad discussion on the schools of thought surrounding such philosophical and sociological dualisms in social science analysis, see Layder, 2001.

This chapter begins by outlining and elucidating some of the key conceptual terms or variables encountered in the thesis, including ideology, irrigation itself, water control, drivers, power and knowledge, scale, discourse, discourse coalitions, strategic groups and their inter-relatedness in the chosen broad disciplinary field of a political sociology of water resources management (after Mollinga, 2008), drawing also from post-structural political ecology approaches. I have already discussed at length the hydraulic society hypothesis as a fundamental concept underpinning the thesis in Chapter 2. Due to the complexity and inter-connectedness of the concepts dissected, there is a need for a considerable degree of theoretical and thematic interlinking within the study. Initially I turn my attention to the abstract concept of ideology, a term that may seem a little unusual when integrated with a critical exploration of societal practices and discourses of irrigation development, within a post-structural framework.

3.2 Conceptual Framework

3.2.1 Ideology

A central contention of this thesis is that state-led irrigation development in Thailand is driven by complex, socio-political mechanisms or processes related to unequal power relations in society, which may be partly explained through ideological concepts. Therefore, it would be helpful to unpack, even if superficially, the concept of ideology to justify its adoption in this research problem. Numerous definitions and meanings of the term exist⁵², not all of which are entirely compatible with each other, leading McLellan (1986:1) to reflect, “[I]deology is the most elusive concept in the whole of the social sciences. For it asks us about the bases and validity of our most fundamental ideas.” Given this diversity, it is sufficient initially to recognize ideology as an essentially contested concept⁵³ and that to provide a more thorough treatment would require the resolution of certain epistemological and theoretical

⁵² Eagleton (1998) lists sixteen different definitions in his book *Ideology: An Introduction*

⁵³ For comprehensive accounts of the history and theory of ideology stretching back to de Tracy’s original usage of the term (*idéologie*) during the French Enlightenment, and subsequent philosophical debates surrounding it as a concept, the reader may refer to the works of Hall (1986), Heywood (1998), Van Dijk, (1998) and Eagleton (2007).

contradictions that extend beyond the scope of this thesis. I will therefore restrict myself to putting forward a couple of definitions that broadly encompass my own epistemological position and understanding of the term in relation to politically contested discourses of irrigation development.

Many modern interpretations of the term are derived from Marx's original concept of ideology, which incorporated a number of important characteristics, as noted by Heywood (1998). Firstly, ideology was couched as being about "delusion and mystification". In other words, it propagates a false or mistaken view of the world, in what Engel's later referred to as "false consciousness". Marx used ideology as a critical concept, whose purpose was to unmask the façades in operation that concealed a reality that lay behind. The contrast between ideology and science (for he considered his own ideas as "scientific"), was vital to Marx's use of the term. Secondly, ideology was linked to a hierarchical class system, as Marx believed that the implicit distortion in ideology stemmed from its reflection of the interests and world views of the dominant, bourgeoisie class. Thirdly, ideology was a manifestation of power. By concealing capitalism's contradictions, ideology served to disguise from the exploited working class, the fact of its own exploitation, and thereby upheld a system of unequal class power. Lastly, Marx treated ideology as only a temporary phenomenon, which would survive only as long as the class system that created it continued. He did not believe that the proletariat needed ideology, as it was the only class that required no illusions. For Marx, dominant values and norms were never simply neutral and "innocent" expressions of the will of the majority (Layder, 2001). In this sense, ideology may mask the exploitative nature of power relations, by representing them as "natural" or somehow inevitable while *legitimizing* the power of a dominant social group or class.

Since Marx, many modern scholars of ideology have critiqued, developed and modified his original concepts to offer more nuanced, but equally contested interpretations. Two of the major criticisms have been related to the classical Marxist conception of society, whereby the base determines the superstructure and that there is a truth about social conditions behind the ideology that the researcher is able to unmask (Hall, 1986). Andrew Heywood, for example, (1998:12) provides a neo-Marxist definition of ideology:

“An ideology is a more or less coherent set of ideas that provides the basis for organized political action, whether this is intended to preserve, modify or overthrow the existing system of power.”

Heywood maintains that this definition serves to draw attention to some of the significant and distinctive features of the phenomenon of ideology. He emphasizes that the complexity of ideology, “derives from the fact that it straddles the conventional boundaries between descriptive and normative thought, and between political theory and political practice” (Heywood, 1998:12). He argues that ideology brings about double syntheses between understanding and commitment, and between thought and action. Descriptive understandings of individuals and groups sharing a common ideology tend to be deeply embedded within a set of normative and prescriptive beliefs, encompassing both “the adequacy of present social arrangements and about the nature of any alternative or future society” (Heywood, 1998:12).

Similarly, Eagleton (2007:47) explains, “[i]deologies are often seen as peculiarly *action-oriented* sets of beliefs, rather than speculative theoretical systems. However abstrusely metaphysical the ideas in question may be, they must be translatable by the ideological discourse into a ‘practical’ state, capable of furnishing their adherents with goals, motivations, prescriptions, imperatives and so on.” While ideologies tend to be both idea-oriented and action-oriented, some ideologies are usually stronger at one level than another, posits Heywood (1998). In this sense, certain ideologies may be understood as operating at a conceptual level above that of the abstract notion of discourse (see Section 3.2.2), which is the process whereby an ideology becomes translated into social practice.

According to Thompson (1984), “[T]o study ideology.....is to study the ways in which meaning (or signification) serves to sustain relations of domination”. Eagleton (2007:5) proposed that a process of ideological legitimation involved six separate strategies: “a dominant power may legitimate itself by *promoting* beliefs and values congenial to it; *naturalizing* and *universalizing* such beliefs so as to render them self-evident and apparently inevitable; *denigrating* ideas which may challenge it; *excluding* rival forms of thought, perhaps by some unspoken but systematic logic; and *obscuring* social reality in ways convenient to itself.” In Eagleton’s view, such “mystification” frequently takes the form of masking or suppressing social conflicts,

“from which arises the conception of ideology as an imaginary resolution of real contradictions.” He stresses that in any actual ideological formation, all six strategies may interact in complex ways.

Based on the various definitions articulated above, a simplified synthesis allows ideology to be understood as sets of beliefs and values held by individuals and groups, which serve to justify and obscure existing unequal power relations in society, and gives recognition to both action-oriented and idea-oriented dimensions. With respect to the broad appeal and commonsensical nature of some ideologies, Heywood (1998:16) argues, “ideologies are embraced less because they stand up to scrutiny and logical analysis, and more because they help individuals, groups, and societies to make sense of the world in which they live.” Is it feasible that irrigation development in Thailand, if found to be widely embraced by multiple groups across society, may be one such ideology that incorporates sets of beliefs, values and norms that help people to make sense of their sociological lifeworlds, while at the same time obscuring a system of domination and excluding rival discourses of water resources management? If so, which ideological beliefs and worldviews are embedded in Thai irrigation development discourse and are they universal or socially differentiated between various groups? And what could be the possible historical roots and origins of such shared beliefs and values? These conceptual issues and questions within the context of Thailand are examined in greater detail in Chapter 5.

3.2.2 Discourse

According to Peet and Watts (2004), discourse is a rather vague term that has come to mean different things when used in different contexts. It is commonly understood as being synonymous with discussion or alternatively is seen as a shared meaning of a phenomenon (Adger et al., 2001). Discourse may also be seen as “a specific ensemble of ideas, concepts and categories that are produced, reproduced and transformed in a particular set of practices and through which meaning is given to physical and social realities” (Hajer, 1995:44). Alternatively, Dryzek (1997:8) conceives of discourse as being similar to “a narrative” or storyline, built from specific kinds of structural elements, through his definition:

“A discourse is a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them together into coherent stories or accounts. Each discourse rests on assumptions, judgments and contentions that provide the basic terms for analysis, debates, agreements and disagreements, in the environmental area no less than elsewhere.”

However, the definition which I perceive may offer most utility for the purposes of this thesis, shows a linkage with the dualistic idea- and action-oriented aspects of ideology (cf Heywood, 1998), suggesting “discourse is ‘practice and theory’ – material activity which transforms nature and society and the modes of thought that inform this action.....In earlier days the word might have been ‘praxis’”⁵⁴(Gaspar and Apthorpe, 1996:4, citing Moore (1995)). Thus, discourse may be conceptually related to the social practices and positions in which it was produced, that draws from Foucauldian notions of knowledge and power (refer to section 3.2.4 below), and builds on a general social constructivist premise that knowledge is not just a straightforward reflection of reality (Phillips and Jorgenson, 2002). Foucault used the term discourse to mean “networks of consensus” (rather than ideology)⁵⁵ and implied that discourse is a form of power, “discursive power”. If a discourse can be understood to refer to all that can be thought, said, or written about a particular concrete object (e.g. an irrigation system or canal), a notional object (e.g. drought) or a specialist area of knowledge (such as irrigation development), then the ability to employ a discourse reflects a command of knowledge in a particular discipline (e.g. agriculture, engineering or hydrology), and such command enables the speaker a degree of control over those without such technical knowledge, whether they are farmer, fisher or a lay person. In this sense discourse embraces a totalizing conception of how society constitutes its members (or subjects) and of the role of language in that process (Grillo, 1997).

In considering modalities of ideological domination and resistance in Thailand, Turton (1986:41) proposed that concepts of ideology “can be usefully developed via

⁵⁴ Praxis is said to refer to the “free, universal, creative and self-creative activity through which man creates (makes, produces) and changes (shapes) his historical world and himself” (Bottomore, 1991:384).

⁵⁵ Foucault rejected the notion of ideology, at least as it had become defined by Althusser and other structural Marxists, where there was an opposition between “the truth” on one hand and ideology on the other (Layder, 1994). Instead he saw discourses as merely perspectives or partial claims on truth, and that there are many truths seen from different perspectives.

concepts of discourse, which allow for the conceptualization of procedures for the authorization, disqualification and restriction of discourse, of discursive practices and their material or physical adjuncts.” Turton, using the language of neo-Marxism, stresses how the ideological inculcation of knowledge and respect for the social division of labour in a wide sense, establishes an authoritative “context and social communication, of discourse in the fullest sense of what constitutes legitimate and prevailing forms of knowledge and expression” (Turton, 1986:42). Despite Foucault’s scepticism about the use of “ideology”, discourse and ideology appear compatible and complementary terms under Turton’s conceptual scheme. When ideology is conceived in a non-perjorative sense as a system of ideas, values and beliefs that are employed in ways which attempt to justify forms of domination and make them seem natural or eternal, then there is a common focus between ideology and some discourses according to Foucault’s conception, reasons Layder (2001). Thus, irrigation development is interrogated as an ideological formation, that masks unequal power relations and is thus variously promoted or contested by various actors and groups in society, that draw upon multiple discourses and narratives in support of their positions, which can be analyzed. In essence, ideologies are reproduced in daily life through discursive practices.

3.2.3 Discourse coalitions and strategic groups

Where dominant development narratives employed by disparate actors are not contested by others, but find resonance or agreement amongst the actors, then those who tell them may form a “discourse coalition”, a term coined by Hajer (1995) in an analysis of environmental policy discourse from a social constructivist perspective. “Discourse coalitions are defined as the ensemble of (i) a set of storylines; (ii) the actors who utter these story lines; and (iii) the practices in which this discursive activity is based”, states Hajer (1995:65). The simplification of storylines is said to allow concrete policy action and problem closure. They form the basis of political coalitions. Blaikie and Springate-Baginski (2007) point out that actor alliances are often temporary and strategic, suggesting a dynamism to the concept of discourse coalitions that can only be understood by uncovering historical context in a given

discourse. Discourse coalitions may sometimes be made up of rather unusual and surprising partners, whom often cluster around and sustain a particular discourse. According to Hajer (1995:13), “[T]hese coalitions are unconventional in the sense that the actors have not necessarily met, let alone that they follow a carefully laid out and agreed upon strategy. What unites these coalitions and what gives them their political power is the fact that its actors group around specific story-lines that they employ whilst engaging in environmental politics.”

An alternative but rather similar conceptual term is “strategic groups”, used to describe societal groups that amalgamate to compete for access to scarce resources. A strategic group is in sociological terms, a “quasi-group”, not individuals but social groups which engage in strategic action aimed “at creating social, political and economic structures and institutions that enhance the chances to appropriate resources” (Evers and Benedikter, 2009b:4). These authors emphasize that strategic groups are not elites or social classes, but cut across hierarchies and strata, with members having disparate lifestyles and beliefs, united by a common goal of gaining access to, control over and distribution of resources, including but not limited to, water, power, prestige and knowledge. According to Evers and Benedikter (2009b) in the case of the Vietnamese Mekong Delta, typical strategic groups may include: government/bureaucracy, military, professionals, intellectuals, land owners, and big business. These authors maintain that the strategic groups share allegiance to a common discourse that invariably promotes infrastructural solutions to socially manufactured water resources problems, but may equally be a counter-strategic group. For Pye (2005) using a historical materialist approach to analyze forest politics in Northeast Thailand, he argued that different strategic groups adopted different strategies to surplus appropriation from non-elite groups, be it capital accumulation for corporate groups, or control of state budget for the bureaucracy.

3.2.4 Power and knowledge

Power is one of those concepts that is unavoidably value-dependent, maintains Lukes (2005:30), as “both its definition and any given use of it, once defined, are inextricably tied to a given set of (probably unacknowledged) value assumptions which predetermine the range of its empirical application”. According to one

definition, “[p]ower denotes any chance to implement one’s will in a social relation also against resistance” (Weber, 1922 cited in Ziai, 2009:185). Weber classified power into two distinct categories: power gained through coercive measures and power based on authority. Such definitions confine power to social relations between individuals, but ignore less personalized power effects. Furthermore, taking resistance as a defining feature of power relations, it overlooks the fact that power can work “to prevent resistance through fear, distorted information or ideologies, for example”, notes Ziai (2009:185), who suggests a more encompassing definition is required. In contrast to Weber, Foucault believed that power did not belong to particular agents such as individuals, the state or specific interest groups, but power was spread across different social practices (Phillips and Jorgenson, 2002). Instead of treating agents and structures as primary categories, Foucault focused on power, differentiating between three types of power; namely sovereign, disciplinary and governmental power. Further, Foucault demonstrated that power is not only something ‘held’ or repressive, as in conventional models of sovereign power, but rather, “power is diffuse – it operates unannounced in myriad social practices, including those we take as ‘merely’ discursive. Indeed, it is precisely because we mistake our ordering of appearances for the world itself, unaware of how our knowledges reflect their social context, that power relations become naturalized in our representations of nature” (Castree and Braun, 1998:19). In developing a theory of power and knowledge, Foucault noted the influential insight that, “the exercise of power perpetually creates knowledge and, conversely, knowledge constantly induces effects of power” (Foucault, 1980:52). Power may have simultaneous enabling and constraining effects upon knowledge (Turton, 1991).

Foucault maintained that the focus of analysis in social research should not be people’s consciousness, so much as the political, economic and institutional regimes that play a crucial role in the production of truth and knowledge (Rabinow, 1991). It is possible to distinguish formal and legitimate forms of power (e.g. government bodies, schools, the courts, etc) from informal, dispersed and “capillary” power, to adopt Foucault’s term. Such is the apparent pervasiveness of power, it has metaphorically been described as “the electrical current of society” Mosse (2005:52). The same author makes a similar distinction to Foucault between actor-oriented and structural views of power: “[I]n actor-oriented or transactionalist (Weberian) views,

power is a non-economic resource that individuals seek to maximize, rather as they might maximize economic returns.....Opposing actor-focused positions is the idea of power as structure, which has a strong tradition in social science. Of course, such structures are not visible; rather they are ideas about the distribution or balance of power in a given society.....” (Mosse, 2005:55)

It has been argued that dominant managerial thinking on irrigation characteristically denies any connections between power and knowledge (Zwarteveen, 2010). She directly attributes this to the fact that much mainstream literature on irrigation is written from the perspective of those who are in control, such as planners, administrators and managers. “Produced knowledge is aimed at helping *them* realize *their* objectives, and enables them to speak more authoritatively through the disembodied, transcendent voice of reason”, argues Zwarteveen (2010:79). Moreover she notes how irrigation “overlords” such as chief engineers discussed effective control strategies, but the possibility of controlling human behaviour and manipulating flows of water and capital was rarely questioned in irrigation knowledge. Such are the socio-political conditions in epistemic communities that allow ideological formations to arise and thrive, supporting Zwarteveen’s (2010) pervasive “god trick”⁵⁶ observation in mainstream water thinking.

The theoretical position adopted in this thesis broadly aligns with that of Mosse (2003, 2005), following Foucault, who maintains that power is dispersed and pervasive throughout society. Such a position looks beyond the capacity of states or powerful elites alone to use coercion or force in controlling members of society through hydraulic control (as in forced relocation when building a dam or irrigation system), but also acknowledges power effects where individuals take voluntary and local decisions in a structured “field of action” (such as water allocation in a small-scale irrigation systems) or in more consensual forms of domination expressed in everyday politics. Following Mosse (2003), I am primarily interested in the cultural articulations of power in and through irrigation development, and its practical and discursive dimensions in Thai society. In this sense, Mosse’s idiom of “the rule of water” seems apposite, as I intend to show elements of the culturally-specific

⁵⁶ This is a reference to the assumption in modernist and post-Enlightenment thinking that one can see everything from nowhere and that disembodied reason can produce accurate and “objective” accounts of the world, derived from Haraway’s (1991) critique.

operation of power in Northeast Thailand and the ways in which the social practices of irrigation development produce symbolic and material articulations of power and authority.

3.2.5 Irrigation as a complex socio-technical practice

As with ideology, there are numerous definitions of irrigation in existence that may be adopted by different actors to emphasize certain dimensions or facets of the concept, technology and practice. A few of these definitions are presented in Box 3.1 below.

Box 3.1: Some selected definitions of irrigation

“Irrigation can be defined as a human intervention to modify the spatial and temporal distribution of water occurring in natural channels, depressions, drainageways or aquifers and to manipulate all or part of this water to improve production of agricultural crops or enhance growth of other desirable crops.” (Newson, 1997:244)

“A system of irrigated agriculture can be defined as a landscape to which is added physical structures that impound, divert, channel or otherwise move water from a source to some desired location. These structures are operated cooperatively for the purpose of producing food or fibre.” (Coward, 1980b:15)

“Irrigation is usually associated with a permanent or semi-permanent water supply infrastructure and a control system consisting of diversion structures or pumps, canals or piped conveyance systems, and flow distribution structures or water application devices. In that sense, irrigation could be defined as the supply of water from elsewhere and its distribution or application for crop growth. That definition of irrigation, although based on a higher level of technology, also includes simple, manual methods of water supply and application, such as the use of a calabash or watering can.” (Kortenhorst et al., 1989)

As Box 3.1 suggests, each definition relies on a personal bias in setting the discursive boundaries of this term, illustrating irrigation’s socially constructed nature that is closely dependent upon the disciplinary and cultural context in which it is applied, rather than signifying a universally understood material practice. It is a generalization, but in both the academic and professional literature on irrigation development and management, most attention has traditionally focused on hydrological, engineering, agricultural and economic aspects. As a result, relatively little attention has been devoted to studying and understanding the human and social dimensions of the development, organization and operations of irrigation systems (Chambers, 1980). Mosse (2003) has argued that two frameworks for understanding

irrigation have dominated the professional arena, namely an “engineering paradigm” and a “managerial paradigm”. The engineering paradigm, with its sub-disciplines such as hydrology, hydraulics, agronomy and construction is based on forms of technical knowledge that rely on practical instrumental rationality, positivist science and are oriented towards the technical control of water and physical processes of agricultural production. The management paradigm, a much more recent arrival than the supply-led engineering paradigm, tends to view irrigation systems in terms of “the effectiveness and efficiency of key functions such as water acquisition and allocation, system maintenance and conflict management” (Mosse, 2003). Both paradigms and the mainstream discourses they produce have sought to command or manage water users’ behaviour as a means to improve irrigation management. Together they form what Mollinga (2007) terms a “social engineering perspective” within recent attempts to reform the agricultural water management sector, with attendant linear models or blueprint approaches for changing societies or organizations (e.g. Integrated Water Resources Management, Participatory Irrigation Management, Irrigation Management Transfer).

In this thesis, rather than adopt a single all-encompassing definition of irrigation, instead I recognize irrigation systems as complex socio-technical interventions in the environment that may simultaneously be conceived as hydrologic entities, engineering works, farming systems or organizational entities (Coward, 1980b). Irrigation interventions, according to Gujit and Thompson (1994:295) “inevitably take on their own social dynamic, creating or disrupting, as they do, certain relations of power between insiders and outsiders and among insiders (local farmers / water users), changing access to and control of vital resources (including land and water), and ultimately altering the way those resources are managed and utilized. The result often has far-reaching consequences, well beyond the narrow focus of the irrigation engineer or planner.”

As argued by Mosse (2003:20), “the wider social and political processes involved in irrigation and their effects remain largely obscure within both engineering and management frameworks”. My primary concern lies with the wider socio-political practices and processes that promote (or resist) irrigation development (in its multiple, pluralistic definitions) in Thai society, rather than the management and operation of irrigation systems. Supporting Mollinga et al.’s (2007) position, I

perceive agricultural water resources management and social transformation through irrigation development as inherently political, because it involves mediation of the social relations of power amongst the actors involved. Secondly, both irrigation development and management are embedded in social processes and forces from outside the field of water resources – therefore, “both the causes and solutions of water problems lie partly in other domains” (Mollinga et al., 2007:706).

3.2.6 Irrigation as water control

Closely related to the conceptual difficulties in pinning down an acceptable definition of irrigation, is the related notion of water control. Bolding et al. (1995) have argued for considering control over water and its distribution to be the central focus for understanding the role of irrigation in agrarian change and believe this is a relatively new insight to political economists, but not for irrigation management scientists, sociologists or engineers (at least in the case of India). However, each of these professions is trained to understand water control in quite different ways. The authors contend that a political economy of water is required, “to show how control in the technical engineering sense, in the sense of managerial control, and in the sense of control as domination, relate to and presuppose each other” (Bolding et al., 1995:807). Ertsen (2008) goes further in arguing that irrigation development in colonial and post-colonial Asian and African nations was as much about exerting full control over farmer actions as it was about controlling water flows. He points to the specific engineering designs of the colonial irrigators (e.g. irrigation gates) changing the target societies and production systems – mostly intentionally, but occasionally not. Similarly, Adams (1990) asserts that the question of where control in decision-making lies may be as important as that of scale for irrigation development in sub-Saharan Africa.

Developing this theme further, Mollinga (2008) proposes that water control embodies three principal dimensions; namely a technical/physical, an organizational/managerial, and a socio-economic and regulatory. Respectively, these categories are said to refer to, “the manipulation of the physical flow and quality of water, the guiding of the human behaviour that is part of water use, and the socio-

economic, legal, administrative and other structures in which water management is embedded and that constitute conditions and constraints for management and regulation” (Mollinga, 2008:10). In arguing for a further generic category of resource contestation in his formulation of water control conceived as a process of *politically contested resource use*, Mollinga uses it to refer to a range of interaction patterns, including negotiation and struggle, as well as less explicit and extended disputes and controversies surrounding water resources management. He stresses that the idea “is to convey that there tends to be something at stake in water resources management, and that the different individuals or groups have different interests” (Mollinga, 2008:10).

Another conceptual distinction that might be made is between the notion of *control of water* and a wider notion of *control of access* to water (Bruce Lankford, personal communication, January 2010). Lankford differentiates these two categories by stating that the former category refers to “the ability of irrigation systems and stakeholders to place specified amounts of water at a specified time at a specified place in keeping with water demands for amounts, timing and place”, forming a technical hydraulic definition. The latter category of *control of access* is far more political and social in nature, and as such, captures the realms of states, communities, water user associations and other stakeholders, and refers to the balance of power, of structure and agency and of democratic spaces. It is this latter concept that principally concerns and informs questions surrounding water control within the present thesis.

Following Tvedt and Jacobsson (2006:xx), there is another possible dimension to water control not adequately captured in Mollinga and Lankford’s models, namely that control of water is associated with cultural constructions of water, which simultaneously embody a range of highly contextual values or ideologies. For example, dams as classical avatars of state hydraulic control over the forces of nature, may also be symbolic reminders of various types of political domination and moral authority, and thus encompass cultural and ideological connotations for society. Mosse (2003:4) expressed this relationship succinctly when justifying how understanding historical control of water helps explain the modern landscape in Tamil Nadu state of India when he stated, “(W)ater flows have not only shaped social and political institutions, they have also legitimized them. Medieval kings and

chiefs controlled and gifted water flows, creating landscapes which inscribed their rule into the hydrology and thus naturalized it.” While water control within an individual system may refer to a mix of technical, organizational and political aspects (Mollinga, 2003), in the case studies I will be more concerned with the control and distribution of the resource through higher order system development interventions than the micro, on-farm or post-turnout levels.

An important distinction could be drawn between endogenously-conceived irrigation systems and those conceived and implemented via external actors or organizations, usually through means of discrete “projects” or “programmes” in time and space, which have multiple implications to social interactions and socio-ecological sustainability (Hill, 2008). Such a distinction quite neatly dovetails with the distinctions made by Wittfogel (1957) between hydraulic agriculture (i.e. state controlled) and hydro-agriculture (i.e. more farmer-controlled) forms of irrigation (see Chapter 2, Section 2.2.2), emphasized by Price (1994) as a vital conceptual point to understanding societal transformation related to water control.

3.2.7 Actors and agency

A recurrent dilemma in social science theory that often confounds researchers concerns the agency-structure dichotomy i.e. the division that reflects an opposition between structure and agency (or action) as mutually exclusive domains and starting points for social analysis. Layder (2001) asserts that this division creates a false assumption that these are separate categories, or that one determines the other in an exaggerated manner. Rather, both deflect attention from the fundamental connectedness of agency and structure (along with other dualisms such as object and subject, macro and micro, society and individual). In an attempt to overcome the division of the two methodological camps, Giddens (1986, 2006) has argued against dualism in social analysis and suggests that we should think in terms of a “duality of structure”. That is, rather than two separate and opposed phenomena, they should be conceived as a single structure which has a dual nature. In such a formulation, structure is intrinsically related to action and vice versa, and the two become united through social practices i.e. the things that people regularly do and which form part

of the social fabric of their lives, in this case with regards to agricultural water development and management practices. An actor-oriented view recognizes that communities of water users are heterogeneous bodies comprised of social actors possessing different, often conflicting, perceptions over water resources management.

Early exponents of a “Third World Political Ecology”, including Blaikie (1985) and Watts (1983; 2000), were largely informed by political economy approaches within a structural framework of analysis. An emphasis on structure tended to downplay the ability of politically or economically weaker grassroots actors to resist their marginal status, notes Bryant and Bailey (1997). Much of the early scholarship explained local environmental conflicts in terms of class relations and surplus extractions connected to transnational capitalist extraction in “chains of explanation” (Blaikie and Brookfield, 1987). Often the role of local politics in mediating resource access and contestation was overlooked and discussion of diverse actors involved (e.g. farmers, state bureaucracies, traders, politicians, etc) was frequently simplistic. The state was typically seen as being little more than an agent of capital, thus “obscuring both the potential autonomy of this actor vis à vis capital, and the diversity of bureaucratic interests that the state often encompasses” (Bryant and Bailey, 1997:13). From the late 1980s on, many political ecology scholars became critical of the deterministic neo-Marxist positions previously adopted and moved towards demonstrating a more complex understanding of how power relations mediate human-nature interactions. In the process, the actual and potential agency of grassroots actors to influence environmental conflicts became more commonplace and it was increasingly used to explain how conflict and change at different scales was the outcome of interactions between different actors possessing unequal power.

According to Bryant and Bailey (1997), actor-based approaches in political ecology “should disclose a complexity of interests and conflicts between organizations; conflicts and competing claims of authority within internal organizations of the state; political implications derived from organizational traits; and coalitions and alliances that may be taking place between competing organizations.” Taking an actor-oriented approach, the research should, as far as possible, seek to identify and clarify the roles, functions and interests of multiple actors related to water resources development discourse (focused on irrigation aspects) both spatially and temporally (bearing in mind that key actors may change temporally). Against this approach were

more Foucauldian positions of decentering the individual as the subject of social analysis, as according to Layder (2001:120), “any position which begins with subjective understanding or a concern with individual meaning and motivation is bound to prove inadequate in its account of social phenomena”. Under a “critical political ecology” approach, the complex inter-relationship between agency and structure in understanding environmental problems and explanations is acknowledged, notes (Forsyth, 2003). In this approach, not only individual actors are considered as having agency in making decisions and acting upon them, but also households, communities, organizations and various other actor groupings are considered potentially valid units of analysis (see Table 3.1 below for some group categories and examples of organizational actors considered as having potential agency in influencing irrigation development outcomes in Northeast Thailand).

Groups	Specific actor examples
International NGOs / civil society	International Rivers; World Wildlife Fund; Stockholm Environment Institute; Save the Mekong coalition; Global Water Partnership?
Transnational inter-governmental	Mekong River Commission (MRC); World Bank; Asian Development Bank (ADB); the Food and Agriculture Organization of the United Nations (FAO); The International Union for the Conservation of Nature (IUCN); the International Water Management Institute (IWMI); the Challenge Programme on Water and Food (CPWF)?
National GOs	e.g. Royal Irrigation Department (RID); the Ministry of Agriculture and Cooperatives (MoAC); Dept of Water Resources (DWR); Thai National Mekong Committee (TNMC); the Ministry of Natural Resources and Environment (MoNRE); The Agricultural Land Reform Office (ALRO); Land Development Department (LDD); Office of Natural Resources and Environment Policy & Planning (ONEP); Dept. of Environmental Quality Promotion (DEQP); Dept of Agricultural Extension (DoAE); the Electricity Generating Authority of Thailand (EGAT); the Bank for Agriculture and Agricultural Cooperatives (BAAC); various military institutions implementing water projects; National Water Resources Committee (NWRC)
National NGOs	Project for Ecological Recovery and Towards Ecological Recovery and Regional Alliances (PER/TERRA); Thailand Environment Institute (TEI); Population and Community Development Association (PDA); Alternative Agriculture Network (AAN); Southeast Asian Rivers Network (SEARIN); Thai Water Partnership
Local GO	Sub-district Administration Organizations (TAO); Provincial and district government offices (multiple natural resources, irrigation and agricultural-based agencies); River Basin Committees (RBCs); Water Users Associations/Groups?

Local NGOs / Peoples movements / civil society	Farmers' organizations; Resource users groups (e.g. ex-Tai Baan network; Nam Songkhram Basin Conservation and Ecological Recovery Network; Living Rivers Siam; Assembly of the Poor (AOP); Alternative Agriculture Network (AAN); individual activists and alliances
Private sector	Agribusiness companies, local and national; infrastructure construction companies; private consultancy companies employed by state to conduct project surveys and studies; private commercial banks
Politicians	Local (village, sub-district), regional (provincial) and national (MPs and Senators). Political parties
Academic institutions	Universities / research centres at regional, national and international levels (these are mostly government-run, not private); individual academics and alliances
Monarchical-linked institutions	Crown Property Bureau; Royal Projects Development Centres; Chaipattana Foundation; Privy Council; the King and members of inner royal family

Table 3.1 List of groups and organizations with an interest in water resources development in NE Thailand during the decade

It will be noted that this list provides a mix of state and non-state actor categories (and some that are more problematic to classify as they may bridge or transcend this binary division, such as the monarchical institutions and the academic institutes), while actors may be considered formal or non-formal. The research will attempt to establish the power relations between these actors and their relative importance in determining water control.

3.2.8 Drivers of irrigation development – overt and covert

Drivers of developmental change are conceptualized here as a range of political, social, economic and ecological factors that help determine, promote or otherwise influence the development process, in this case the irrigation development paradigm of a developing country. Drivers may be overt or hidden, depending on the context; they may also be considered material, ideological or discursive drivers. This thesis is mainly interested in understanding the underlying or hidden drivers of development that are mostly causally related to socio-political conditions or factors.

It was mentioned in the Introduction (Chapter 1) that there has been a widespread tendency in developing countries to treat irrigation development as a “privileged

solution” (see Moris, 1987), often operating within a “sanctioned discourse” (see Allan, 2002) where it has tended to escape a similar level of critical scrutiny by academic researchers, aid donors and state agencies compared to other major development intervention sectors, such as forestry or land rights. One possible explanation for the irrigation sector falling within a critical blind spot, could be the rarity with which political and cultural drivers of irrigation development (see Molle et al., 2009d) are considered in most mainstream managerialist and instrumentalist approaches to water resources development. Conventional analyses are more likely to consider only the socio-economic drivers of change identified in an IWMI and FAO report on trends and drivers of Asian irrigation (Faures and Mukherji, 2009). These included such drivers as demographic pressure, urbanization, agricultural diversification, changing diets and climate change in an analysis for Asian changes in irrigation. Similarly, the most common drivers of change reported to affect irrigation water management in large rice-based systems in Southeast Asia by participants at a 2005 FAO conference were cited as food security, poverty alleviation and regional development, increasing concerns for environmental protection and ecosystem management, issues of energy and other chemical inputs, and climate change (Facon, 2005). Supporting the more conventional drivers of change expressed above, Molle and Floch (2008a) identified overriding national policy concerns, such as enhanced national security, maintenance of political stability, rural poverty alleviation, food security, self-sufficiency and export-substitution concerns as being the most “pervasive justifications” for Asian irrigation development. Additionally, modernization narratives, national and regional strategic or geopolitical objectives, such as the earlier struggle against the spread of communism, have also been powerful discursive elements fuelling water resources infrastructure development.

A paper produced by the Australian Mekong Resource Centre (2005) found that water resources scarcity, conflict, ideology and international water and environmental policy were the most important drivers for change in the Australian, Southeast Asian and Pacific regional water policy sector. Turning to critical examinations of the evolutionary history, politics and discourses of irrigation development paradigms in the case of Northeast Thailand, there have been attempts to systematically identify some of the overarching ideological and political “meta-

justifications” employed at the national level by powerful state actors to promote irrigation development (Molle and Floch, 2008a; Molle et al., 2009a). Building on this earlier analysis to further unpack the nexus of political and ideological drivers of irrigation development associated with the modern Thai hydraulic mission, both spatially and temporally, is a primary aim of this thesis

3.2.9 Issues of scale

Issues and choice of geographical scale are central to explanations of social transformation and political contestation over water resources. By stressing the importance of scale, Zimmerer and Bassett (2003:289), believe that one of the challenges of political ecology analysis is to break out of pre-given, scalar constructs (e.g. local, regional, national, global), “to examine human-environmental dynamics that occur at other socially produced and ecological scales”. This would imply paying greater attention to the politics of scale and integrating ecological scales into analytical frameworks. Actors may help to produce scales through their activities, and in turn, scales constrain and guide these activities by providing or concealing actors and resources (Williams, 1999). States, with their superior power, scope, pre-eminence, ability to create policies, laws, and control of media are often able to circumscribe how scale is represented and if necessary, reinforced, whether through coercion or more consensual means. (See Section 2.4, Chapter 2 for further discussion about the limits of fixing scale).

In attempting to forge linkages and connections between the local and the national levels, the micro and the macro, it becomes apparent that scale not only matters for water resources management discourse, but scale appears a highly political and contested concept. Several regional researchers have elaborated the close relations between scale and power in complex water resources and environmental conflict contexts in the wider Mekong region, by tracing the linkages across a variety of scales and through multiple actors (Sneddon, 2002; Molle, 2003; Sneddon, 2003b; Molle, 2007a). Recognizing that scales are joint products of social and biophysical processes and conscious that the politics-of-scale metaphor has been stretched to include a lot of different spatial relationships, Lebel et al (2005) argued that, “there

are benefits to understanding – and actions to distinguish – issues of scale from those of place and position”, when viewed under an encompassing “politics of space” rubric. Using examples drawn from water resources governance in the Mekong Basin, the authors use “politics of scale” to refer to situations where different actors contest the spatial extent and resolution of data and decisions. A “politics of position” is used to refer to politics among locations that are dependent on relative physical position, such as between upstream and downstream water users or opposite banks of a river. By contrast, a “politics of place”, refers to the enactment of power relations among stakeholders that arise because of specific characteristics of interactions between places, above and beyond those arising from levels or position. These scalar interactions point to the interconnectivity of water as a hydrological, ecological, socio-political and symbolic resource.

This research will endeavour to take into account politics of scale, position and place considerations that emerge from the study of irrigation development discourse, actors and practices within the Nam Songkhram Basin, itself embedded in the wider Northeast region and Thai national scales. River basins provide a conceptually useful spatial unit, at least initially, for examining interactions between complex waterscapes and societies (Molle, 2007a). Following Sneddon’s (2000) approach, this research attempts to capture elements of four scale-related processes at play, namely, 1/ extra-basin processes (e.g. irrigation development in rest of Northeast Thailand and at wider national level); 2/ basin-scale processes (e.g. larger irrigation development schemes); 3/ intra-basin processes (e.g. dynamics of smaller-scale irrigation development); and 4/ cross-scalar processes (e.g. attempts to manage the river basin as a hydrological unit). Such an analytical strategy allows for an insight into ways in which socially constructed scales of action intersect with ecologically constructed scales. The Nam Songkhram Basin, it is suggested, offers a suitable primary arena within which to examine multi-scalar processes, in so far as it is a distinct, peripheral river basin located about as far from the hydraulic core (Bangkok and Central Plains) as one can find in Northeast Thailand, yet is embedded in several other scalar constructs, both social and environmental.

The methodological approaches adopted in the research to gathering, analysing and explicating empirical evidence from the field is articulated in the following chapter.

Chapter 4 Methodology

4.1 Introduction - Research Design

The socio-politics of water resources development is recognized as a highly complex field of study that has material and discursive dimensions which encompass multiple disciplines that lend themselves to numerous methodological approaches and research methods. This research, recognizing the inherent empirical and theoretical complexity of water resources seeks to understand some of the perceptions and discursive constructions of irrigation development adopted by various actors involved, using a multi-disciplinary approach in a number of arenas and research sites, from the strictly local or village to national or state levels. This chapter outlines the research methodology used in this study to provide an explanation for the linkages between water control for irrigation, society and politics in a cross-scalar settings. The spatio-temporal and disciplinary complexity provided numerous practical and theoretical challenges to the researcher that resides under a general rubric of “hybrid research” (see Batterbury et al., 1997; Robbins, 2004), which tries to combine scientific, critical and local knowledge sources and follows an inductive reasoning process. Rocheleau (2007:718) notes how certain political ecologists using hybrid research have pioneered “a mix of qualitative and quantitative methods with technological, ecological and social imagination”. The proposed research design outlined in this chapter begins to more concretely operationalize and justify the methodological approach employed, which primarily involved a range of qualitative social science research techniques that may appear rather eclectic at first glance. Initially I discuss the case study approach adopted and the reasons why it was selected and applied in the context of this research. I then go on to elaborate the data collection methods and tools, before discussing the main analytical methods used, namely discourse analysis. Lastly, I outline the main and supporting research questions adopted that guide the research.

4.2.1 Case Study approach

This study employed a case study approach, which tends to support more inductive and qualitative research approaches. Such an approach lends itself well to an exploration of the underlying processes of complex social phenomena to provide the researcher with an opportunity to ground the study at a particular geographical

location, to better understand local context and develop more refined arguments from empirical findings. In the view of Yin (1994), the case study can be conceived as an ‘all-encompassing method’ that is grounded in the collection and subsequent interpretation of empirical data. It typically relies on multiple sources of evidence, a range of sampling techniques and its direction is guided by the formulation of a prior set of propositions and conceptual positions. Case studies may suggest theoretical generalizations, reveal power relations, unveil the complexity of existing social relations and emphasize the importance of historical analysis (Orum et al, 1991:6-7 cited in Sneddon, 2000).

In this study, the main “unit” of analysis adopted is the Nam Songkhram river basin, seen as both a grounded case study and case history, thus allowing wider social transformation processes (i.e. both internally and externally to the basin unit itself) to become apparent. A river basin affords an opportunity to empirically observe and investigate aspects of the cultural, political, economic, institutional, ecological processes of irrigation development operating at multiple scales, from the village level up to national and regional levels. Furthermore, the river basin case study is an apt unit of analysis, due to the basin-centric ways that states often perceive water resources development and management, such as through introductions of river basin organizations under narratives of decentralization and IWRM principles. I selected the Nam Songkhram basin for a variety of reasons, but important amongst them was its relative lack of previous exposure to study, my own previous knowledge and experience of the basin, its interesting socio-ecological diversity and fourthly, its recent targeting by state hydrocracies for new large-scale irrigation developments.

A political ecology approach views river basins as politicized arenas where different actors “vie for access to the resource, for protection or compensation, and use their social or political power to elicit or impose regulations and interventions in line with their common interests”, argues Molle (2007a:361). The main variables in this case include, on one hand the underlying drivers of irrigation development within a wider context of national level hydraulic development pathways, and on the other, explicating the actors, discourses, processes and practices related to irrigation development at the river basin level. Hence, the thesis presents a partial historical analysis of both Northeast Thailand and the Nam Songkhram Basin irrigation

development paradigm essentially from the start of the twentieth century, highlighting multiple actor knowledge constructions.

4.2.2 Multiple and Mixed Methods Research

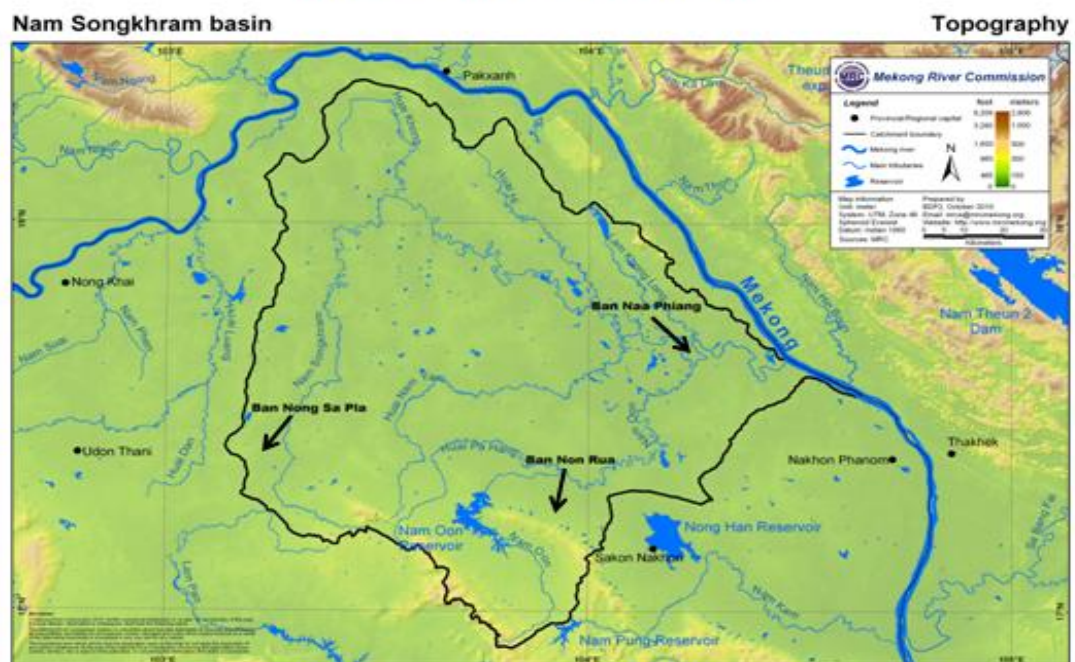
As alluded to above, adoption of a case study approach allows for appropriate multiple and mixed methods to be used. These commonly combine quantitative and qualitative data collected from the field, but with a predominant bias towards the latter techniques, as qualitative techniques are better suited methodologically to understanding the politically contested and situated nature of complex water conflicts and multiple actor narratives in a river basin setting. Mixing may involve multiple techniques including those which are not easily classified as either quantitative or qualitative, according to Lebel (2007), in recommending its value in water policy research. I have consciously attempted to shy away from what Chambers (1980:29) called a “cramped vision” amongst water resources researchers’, mired in narrow disciplinary boundaries, that has created a “reluctance to explore a no-man’s land between disciplines.” Mixing can be sequential or simultaneous and may involve several iterations, implying there are no hard and fast rules with regards to mixing methods (Lebel, 2007), which can open it up to possible criticisms of lack of rigour or eclecticism. However, I believe the advantages outweigh the disadvantages and the plurality of sources can be complementary in working towards more complete and profound understandings of complex social phenomena in time and space. Indeed, Lebel argues that mixing quantitative survey techniques with qualitative data gathering procedures through surveys allows identification of interesting cases for later in-depth contextual and comparative analyses.

In this study, some primary mixed quantitative and qualitative data was collected from a focused public questionnaire survey and secondary quantitative data gathered from various reports (e.g. declared areas of irrigation command areas and cropping areas) to triangulate amongst various sources, but not necessarily included in the final analysis.

4.2.3 Research Site Selection

The Nam Songkhram Basin covers an area of 13,128 km² that encompasses a wide variety of ecosystems and land use types, is eco-hydrologically linked to the Mekong river, has an estimated population of approximately almost one and a half million and spans parts of four provinces (Blake et al., 2009). The Nam Songkhram Basin exhibits a wide range of agricultural water management types and practices, has an inherently complex hydrology and ecology, and due to its peripheral position within the nation-state, has linkages with wider geo-political entities both inside and outside the confines of Thailand.

Fig 4.1 Location of fieldwork village sites in the Nam Songkhram Basin
(Source: Mekong River Commission, 2010)



The research was empirically grounded within the Nam Songkhram Basin at three case study villages, located in different parts of the basin (see Fig. 4.1) and selected as being broadly representative of a range of basin conditions. I wanted each to represent a range of agro-ecological conditions and different water resources management scenarios. Further, each village lay in a different administrative province (Nakhon Phanom, Sakon Nakhon and Udon Thani), providing more

heterogeneity to the cases. These were chosen through a process of careful consideration and elimination partly based on the researcher's previous extensive experience of the Basin and partly following consultation with local knowledge "gatekeepers". In two cases, these gatekeepers also provided recommendations about potential local hosts and key contacts. Before making a final selection concerning the villages, I visited each to assess its suitability based on a wide range of criteria, not least a willingness on the part of village elites (i.e. headperson) to host my research. The three community names, locations and brief contexts were as follows:

1. Baan Naa Phiang (pop. 718 – *Moo* 5⁵⁷), Sri Songkhram District, Nakhon Phanom province – located in Lower Nam Songkhram riverine floodplain wetlands. Subject to prolonged annual flooding of surrounding lands for several months, seasonally curtailing agricultural potential, but providing rich capture fishery opportunities. Located just 3 kms from district centre of Sri Songkhram, so good local market connections. Agricultural frontier village, with declining reliance on capture fisheries and harvesting natural wetlands products, as natural wetland habitats are converted to cropland. Considerable off-farm revenue apparent in local economy. Main ethnic group: *Lao Nyaw*
2. Baan Non Rua (pop. 1,576 – *Moo* 3 and 13 combined), Phanna Nikhom District, Sakon Nakhon province – located in Nam Oon basin (a main tributary of Nam Songkhram), lying partly within the RID Lam Nam Oon Irrigation Project. Has good access to nearby Phu Phan hill range and National Park (NTFP collection seasonally). Composed of mixed upland rainfed and lowland irrigated landscape. Some intensive irrigated dry season cultivation of vegetable, fruit, flowers and seed crops practiced, in addition to rice cropping and limited aquaculture. Considerable off-farm revenue apparent in local economy. Main ethnic group: *Phu Thai*
3. Baan Nong Sa Plaa (pop. 1,174 – *Moo* 8 and 9 combined), Nong Han District, Udon Thani province – located in Upper Nam Songkhram Basin, composed

⁵⁷ *Moo* is an abbreviated form of *moobaan* to refer to a village unit in the Thai administrative structure, and frequently a single large village may be split up into a several smaller units or *moo*, as in the case of Baan Non Rua and Baan Nong Sa Plaa. Each *Moo* is given a number which is often how local officials refer to particular villages in reports and formal documents, rather than their local names.

of wet rice floodplain and upper alluvial terraces, mostly planted to sugar cane. Local economy influenced by large sugar mill, 3 kms away, providing seasonal employment for many and permanent employment for a few. Sub-district centre and location of TAO office, next to a large artificial lake. Agriculture-based employment in long-term decline and high rate of out-migration, both domestic and overseas bringing considerable remittances to local economy. Main ethnic group: *Lao Vieng*

From the grounded data and experience gained in the three fieldwork villages, the researcher was able to further identify and draw out sub-case studies of representative irrigation projects, selected across a variety of scales. These ranged from the large-scale, RID managed (e.g. Lam Nam Oon Irrigation Project and the proposed Nam Songkhram Project) to much smaller, village-level water resources development projects (e.g. Huay Wang Rua, Ban Non Rua and Nong Saeng, Baan Naa Phiang), elaborated in Chapter 8. These empirical case studies are used to illustrate the discourses and practices of irrigation development in finer detail and provide comparisons and linkages across scales to the basin level and beyond, and to determine whether elements of a common irrigationalism ideology are discernible at all these projects. I am also interested to learn to what extent ideology plays a role in their planning, construction, implementation and outcomes, on the basis of a range of actor narratives related to these developments. The multi-scalar politics of irrigation development are explored at each site according to principles of grounded and reflexive research.

4.3 Elaboration of data collection methods

The principal data collection and generation techniques employed included: a/ document review; b/ qualitative interviews; c/ a structured questionnaire survey; d/ field and participant observation; e/ other participatory rural appraisal (PRA) tools (e.g. focus groups and timelines), as deemed appropriate and opportunity arose. Taken together, they allowed a range of contextually appropriate techniques to be trialed (e.g. interviews and in-depth observation) that helped to reinforce the

empirical depth of the research, and permitted a greater degree of triangulation of results between techniques. Fieldwork in Thailand took place between November 2009 and August 2010, with about a year devoted afterwards to data analysis and interpretation.

4.3.1 Document review

This process began prior to commencement of fieldwork, studying various printed and electronic documents concerning water resources development and management in the Northeast, Thailand as a whole and the wider Mekong region, with a special emphasis on irrigation, from both the professional and academic spheres. I laid special emphasis on identifying texts that contained narrative justifications supporting or in opposition to irrigation development pathways and practices, taking note of the actors or organizations involved. The process continued once in-country, by accessing various donor organization, international development agency and government-commissioned reports, feasibility studies, project progress and evaluation reports, environmental impact assessments, newspaper and magazine articles, books and various other literature concerning irrigation development, much of which would be classified as “grey” literature. The literature, in both English and Thai languages, was accessed from a variety of sources, including library collections (universities, civil society organizations and those of the two main hydraulic bureaucracies), Internet sources, and from direct requests to document authors. A particularly useful collection that became available during the course of my fieldwork relating to water resources development in the Northeast over a period of thirty years (including invaluable progress and evaluation reports on the Lam Nam Oon Irrigation Project in Sakon Nakhon), were a set of previously classified documents released by USAID⁵⁸. Much historically interesting data (textual and visual) on water resources development project evolution, key actors, organizations and popular narratives was obtained via both hard copy and online archives of the two main English language daily newspapers in Thailand – The Bangkok Post and

⁵⁸ This resource is accessible through the archives of the USAID’s Development Experience Clearinghouse (DEC) website: <http://www.usaid.gov/results-and-data/information-resources/development-experience-clearinghouse-dec>

The Nation – especially for the discourse analysis of the Green Isaan Project in Chapter 7. The process of reading, coding and interpreting significant quantities of historical documents related to irrigation development reminded the researcher to be constantly aware of the particular institutional contexts, actors' positions and frames of reference under which each was produced and remain sensitive to the strategies, rationales and ideologies of the subjects studied (cf. Mason, 2002).

4.3.2 Qualitative interviews

The researcher conducted a total of 36 formal, in-depth and semi-structured interviews (SSIs) with a range of actors from state and non-state organizations connected to irrigation development in Northeast Thailand during the course of fieldwork (these are listed in Appendix A). Attention was paid to trying to ensure a broad cross-section of interviewees representing the main water resource management bureaucracies at both the national and provincial levels (8 persons); politicians spanning local to national levels (4 persons); academics in water resources related disciplines (8 persons); present and former irrigation development consultants (2 persons); civil society representatives and activists (5 persons); international development and research agency officials (6 persons); plus local leaders (3 persons). Interviews were arranged via a mix of cold call contacts to individuals and organizations, recommendations and introductions from others and previous personal acquaintances, with interviews arranged up to several months in advance. The interviews were conducted both as formal interviews with prepared questions and more informal, less structured meetings, especially where serendipitous opportunities presented themselves in the course of fieldwork. The sets of questions (12 – 18 in total) were tailored specifically to the individual interviewee and designed to be open-ended, non-inductive and flexible in direction, if opportunities arose to pursue promising lines of enquiry. Certain questions, such as perceptions around drought or attitudes towards further large-scale irrigation development in Northeast Thailand were asked to most interviewees. Every interview was recorded with the prior consent of the interviewee and additional aide memoire notes were taken during or immediately after the interview. Those

interviews conducted in Thai language (approximately 50 %) were later transcribed and translated to English by a locally hired translator, with the balance transcribed by myself. In addition to the SSIs, numerous *ad hoc* interviews with local water resource users and actors within the Nam Songkhram Basin were conducted during field visits. The interview transcripts were later manually codified and analyzed by the researcher as a way of extracting patterns, regularities, differences and interpreting meaning from the texts.

4.3.3 Structured questionnaire survey

This field tool, although not normally associated with qualitative social science approaches, was employed to gauge public perceptions across different locations regarding general water resources development and management issues in Northeast Thailand. I could find no published research on this topic, despite its potential relevance for understanding the assumptions on which an important regional development paradigm is based and whether the dominant discourse of the centre is reflected in the narratives and perceptions of the general population, especially those at the margins. I was particularly interested in getting a sense of how ordinary Thai people view some of the dominant narratives concerning water resources, including questions around attitudes towards drought and floods; causes of and favoured solutions to regional water related development problems; perceptions of the appropriateness of state development policies and strategies; attitudes towards large-scale irrigation projects; and strength of agreement to certain statements about critical water resources development issues. I was originally interested in getting a measure of how such perceptions may differ or coincide with the proposed dominant ideology held by powerful actors (see Chapter 5, Section 5.2), taking into account such variables as location, age and education, for example. In this sense, it follows a similar approach to that employed by Lipchin (2007) to collect data on the perceptions of Israeli settlers to the dominant Zionist ideology with respect to water development and agriculture. It was seen as a complimentary method to the other qualitative methods used to elicit field data that allowed triangulation across methods. In addition, it permitted the researcher an opportunity to test and gain familiarity

with the advantages and disadvantages of this semi-quantitative method and how it could be integrated into a mixed methods approach. A preliminary set of questions were formulated and a questionnaire was designed in English and then translated to Thai prior to entering the field. The draft questionnaire was scrutinized for its utility in close collaboration with colleagues within the Wellbeing and Sustainable Development Research Group (WeSD) at Khon Kaen University (KKU), before conducting a pilot test on-campus in December 2009. The questionnaire design and questions were modified slightly following this practice exercise, prior to conducting the actual survey during January and February 2010, using social science students from KKU as enumerators. The survey was conducted at three locations, one day per site, with a total of 337 people interviewed, broadly representative of populations living in the capital (Bangkok), major regional city (Khon Kaen), and rural village in the Nam Songkhram Basin, as outlined in Table 4.2 below.

Sample Group	Khon Kaen	Bangkok	Nam Songkhram Basin village
Location of survey	Main bus station and Central shopping mall	Lumpini Park, Central Bangkok	Baan Nong Batao, Sri Songkhram District
Date of survey	23/1/10	30/1/10	13/2/10
No of respondents (n)	121	107	109

Table 4.2 Details of questionnaire survey locations, dates and number of respondents in each sample group

The raw dataset acquired in Thai language was later coded by myself, translated back in to English, entered into a statistical software package (SPSS) by a recently graduated student experienced in the software, and the results analyzed across a range of variables. In the end, only a limited subset of the survey results are discussed in the thesis (in Chapter 6, Section 6.7), as I elected to focus my main analysis on other aspects of discourse analysis. In retrospect, this method provided a useful indication of the extent to which Thai citizens equate the Northeast region with descriptions of drought and perceive water scarcity to be an important development issue of the region, vis à vis other types of problems. Similarly, it was able to partially quantify across sample groups the level of popular support for a range of suggested development solutions to perceived dominant problem framings, which could then be triangulated with the responses over similar issues provided by more powerful societal actors in interviews, such as government officials, politicians, local leaders or civil society activists, to see how they coincided or differed. As such, the results obtained should be regarded as indicative only of the range of views held

by the wider population in each of the locations surveyed, and may be more thoroughly explored in future research outputs. A copy of the questionnaire survey is provided in Appendix B and some of the tabulated responses in Appendix C.

4.3.4 Field and participant observation

Mason (2002:84) defines observation as a method of generating data which entails the researcher immersing him/herself in a research setting in order to experience and observe at first hand “a range of dimensions in and of that setting”. Participant observation proved to be a crucial tool for understanding the local context of water resources development, the social actors and groups involved, and the discourses, narratives and practices they call upon across a range of spatial levels. The relatively long period of exposure (ten months) spent in the field, spanning a range of seasonal conditions allowed ample opportunity to directly observe a wide range of actors in a variety of situations, from undertaking agricultural water management tasks, to state official-villager interactions and most vitally, the development of several small-scale water resources development projects at the case study villages. By becoming temporarily “embedded” in the local context with host families and tending towards ethnographical methods consistent with the case study approach, permitted close observation of local processes of decision-making, negotiation and contestation over water resources, ranging from individual, household and community levels. At the same time, I was able to observe extra-local actors (both state and non-state) involved at higher levels of the water resources governance hierarchy interact, through attendance as an observer at several regional meetings related to river basin and water resources development planning, offering further insights into the nature of decision-making processes and power relations in the sector. Notes of local observations, emerging narratives, key phrases and general reflections were kept in a field diary, and later used as an aide memoire for inductive theory building. The data contained in field notes, according to David and Sutton (2004:110) is, “the most explicit example of the on-going process of data analysis within the data collection process itself and in the resulting data.” The field notes become a record of a cyclical

process of data collection and provisional analysis, even though they are necessarily selective accounts of events, people and places.

4.3.5 Other PRA tools:

Whilst based in the field, the researcher adopted some of the basic tenets and tools of participatory rural appraisal (PRA) for data collection purposes. This included focus group discussions, use of historical time lines and village transect walks with key informants, which often helped to triangulate and solidify other emerging themes, issues and ideas. At the end of the fieldwork, a final research feedback workshop was held in each village which provided a useful opportunity to test hypotheses concerning local power relations amongst the participants, who included state and non-state actors.

4.4 Analytical Approach – Discourse Analysis

The main analytical approach adopted was discourse analysis, which has become one of the most widely used analytical tools within post-structural political ecology approaches. Discourse analysis takes as its starting point, a view that our access to reality is always through language and that our ways of communicating do not neutrally reflect the world, identities and social relations, but play an active role in creating and changing them. For political ecologists like Escobar (1995), Bryant and Bailey (1997) and Agrawal (2005), the need to examine social and historical contexts behind discourses and narratives, is as important as the analysis of text itself, often based on Foucaultian-derived theories of discourse (see Section 3.2.2). In discourse analysis, theory and method are intertwined, stresses Phillips and Jorgenson (2002:4), and it is permissible to combine “elements from different discourse analytical perspectives and, if appropriate, non-discourse analytical perspectives”. One approach, known as Critical Discourse Analysis (CDA), has been used in the empirical study of relations between discourse and social and

cultural developments in different social domains (Phillips and Jorgenson, 2002:60-64), drawing heavily from earlier work by Fairclough and Wodak (1997).

In this approach, it is implicitly understood that “discourse functions ideologically”, and importantly in terms of researcher positionality, that CDA does not “understand itself as politically neutral (as objectivist social science does), but as a critical approach which is politically committed to social change” (Phillips and Jorgenson, 2002:64). Regarding the first point, in CDA it is claimed that, “discursive practices contribute to the creation and reproduction of unequal power relations between social groups – for example, between social classes, women and men, ethnic minorities and the majority. These effects are understood as *ideological* effects” (Phillips and Jorgenson, 2002:63, emphasis in original). These authors make the argument that in contrast to discourse theorists, including Foucault, CDA does not diverge completely from Marxist traditions on this point, but enlists the concept of ideology to theorize the subjugation of one social group over others. Hence, “the research focus of CDA is accordingly *both* the discursive practices which construct representations of the world, social subjects and social relations, including power relations, *and* the role that these discursive practices play in furthering the interests of particular social groups” (Phillips and Jorgenson, 2002:63). It is “critical” insofar as it aims to reveal the role of discursive practice in the maintenance of the social world, including where unequal relations of power exist.

Gasper and Apthorpe (1996:6-10) consider the following five (interlinked) aspects concerned with policy discourse analysis that they believe are important for examination in any given policy practice case:

- The formation and use of concepts
- The use of tropes and other stylistic devices
- Framing
- Stories and narratives
- The implicit and explicit rules of validation

Out of these categories, I have selected two aspects which I consider to be most directly relevant to analyzing the specific context of irrigation development discourse in Thailand, namely framing and development narratives or storylines.

4.4.1 Framing

Peet and Watts (2004) have used the concept of framing in reference to “environmental imaginaries”, referring to the frameworks through which different individuals or societies perceive and evaluate aspects of environmental change. In the view of Gasper and Apthorpe (1996:6), framing is crucial in all policy practice, specifically, “who or what is actually included, and who and what is ignored and excluded.” The purpose of policy, from early proposals through to implementation, is to identify and frame a complex problem to be resolved by a simple solution. Through simplification of the complex, “policy arguments become the more compelling the more they are able to appear as inevitable, as if no other strategy could be feasible or conceivable” argue Friend and Blake (2009). (cf. “There is no alternative”, often referred to as TINA narratives (Mehta, 2001)). However, identifying frames is not always a simple task, as frames are generally implicit rather than explicit, notes Forsyth (2003:78), so “a distinction has to be made between an explicit policy position or choice, and the more tacit frames that give rise to explicit positions”. Reviewing some of the ways in which environmental and social problems have been explicitly framed and solutions arrived at within state policy statements regarding irrigation development will be a task of Chapters 6 and 7.

4.4.2 Development narratives

Evidence and arguments in development discourses are commonly expressed through narratives, which may be thought of as causal stories⁵⁹ which bundle information and convey plausibility to the author or speaker. Policy often constructs what Roe (1995) refers to as “development narratives”, which may be seen as complete stories. More specifically, development policy narratives may be seen as, “not ‘just talk’ or inventions for others’ amusement, but persuasive constructions with a beginning (assumptions, problem framing, choice of issues, etc), a middle

⁵⁹ Hajer (1995) prefers to use the term “storylines”, which essentially refers to the same phenomena as narratives within political debate over development or environmental discourses.

(argumentation, supporting evidence, justifications, troublesome side issues and other relevant circumstances) and a conclusion (what should be done and policy recommendations)” (Blaikie and Springate-Baginski, 2007:92). They are selective of some facts while ignoring others, and interpret information in a particular way in order to tell a persuasive and consistent story. Narratives also tend to determine the data that can and cannot be considered in policy debates; they “help decision-makers confidently fill the gap between ignorance and expediency” argue Fairhead and Leach (1997:35). In the view of Molle (2006), “the ‘naturalness’ of narratives, or storylines, seemingly anchored in commonsense, makes them very resilient.”

Where a dominant or mainstream narrative exists and is perceived by other actors as serving the interests of only particular groups in society, then frequently alternative or counter-narratives emerge to serve a different political constituency. These may just be counter-factual or identify and frame development problems and solutions in entirely different ways to the dominant or “classic” (often state-led) narrative or storyline. These may often include non-official narratives lying outside formal policy-making channels, constructed by less-powerful actors in society, who utilize less formal knowledge sources in their construction. These might include actors such as non-government organizations (NGOs), women’s groups, indigenous people’s groups, wetlands or forest user groups or alliances, activists, academics and individual resource users, and may not always be codified in writing but verbally reproduced. Blaikie and Springate-Baginski (2007:93) state, “all narratives are often (but not always!) coherent, persuasive and common-sense accounts; but they are usually competitive with others for the ear of particular audiences.” Referring to Indian and Nepali narratives of participatory forest management, these authors identify and model a “state forest administrative” narrative and a “popular / civil society” narrative as being competing narratives in the policy process appealing to different networks of actors and target audiences. This study will attempt to identify and differentiate the main competing development narratives and the actors clustering around them through analysis of irrigational discourse and narratives.

4.5 Research Questions and methods

In order to address the basic “problemshed” issue identified by this research regarding explanations for the underlying socio-political drivers of the multi-scalar irrigation development paradigm in Northeast Thailand, a main research question and a number of supporting questions have been formulated to assist in guiding the research towards satisfactory conclusions. The principal and overarching research question guiding the thesis is:

“What are the discourses, actors and practices that drive *irrigationalism* in the context of Thailand, cast as a modern hydraulic society?”

A number of sub-questions (SQ1-6) were formulated to further support and answer the framework of the main research question, with the research methods employed to generate empirical data noted below and the main chapter where each question is addressed indicated in parentheses:

SQ1: What are the probable discursive roots and origins of *irrigationalism* in Thai society?

Methods: Document review, structured and semi-structured interviews
(Chapter 5/6)

SQ2: What are the main development narratives driving *irrigationalism*, framed by different actors, both historically and in the present context?

Methods: Document review, structured and semi-structured interviews, questionnaire survey
(Chapters 5/6/7)

SQ3: Which actors appear to determine control over irrigation development at multiple scales, using what discourses and pathways?

Methods: Document review, structured and semi-structured interviews, direct observation

(Chapters 7/8/9/10)

SQ4: Which are the important power relations mechanisms at work across various scales, and can distinct “discourse coalitions” or “strategic groups” be identified?

Methods: Document review, structured and semi-structured interviews, direct observation

(Chapters 8/9)

SQ5: To what extent are understandings of water scarcity socially constructed, and whose interests are served by drought narratives?

Methods: Document review, structured and semi-structured interviews, direct observation, questionnaire survey.

(Chapters 6/7)

SQ6: How closely does Thailand fit Wittfogel’s characterization as an exemplar of a “hydraulic society” in the modern-day context?

Methods: Document review and synthesis of other qualitative data.
(Chapter 9/10)

4.6 Summary

This chapter has laid out the methodology of the thesis through an elaboration of the research design, analytical approach and data collection methods used to help answer the research questions and “operationalize” the research. Drawing from methodological approaches from post-structural political ecology and tenets of Mollinga’s (2008) “political sociology of water resources management”, the research relies upon and discusses the relevance of the following key concepts: ideology, discourse, development narratives, discourse coalitions and strategic groups, irrigation as a complex socio-technical practice, irrigation as water control, actors and agency, irrigation development drivers, and issues of scale. I have discussed and justified elements of the research design, before outlining the main data generation techniques selected for use in the field and analytical methods adopted post fieldwork. Finally, I have laid out the main research question with

supporting sub-questions that have guided me towards addressing the principal research “problemshed” issues identified. In Chapter 5, the first of the main empirical chapters, I start to explore in greater depth the concept of “*irrigationalism*”, its roots, evolution and how it is manifested in the context of modern Thai society.

Chapter 5 Irrigationalism

“Mai mee arai, tee wisawagon Thai thaam mai dai”

“There is nothing that Thai engineers cannot do”

(Slogan written on the back of a Khon Kaen University student’s jacket, observed on-campus in November, 2009, recalling a quote attributed to Field Marshall Sarit Thanarat, in which “police” was originally substituted for the word “engineers”)

5.1 Introduction

This chapter develops the concept of “*irrigationalism*”, a term coined with reference to the specific context of Thailand, although it may have wider conceptual applicability beyond the borders of Thailand. It starts by providing a general outline of the concept with a working definition, before considering how irrigationalism may have evolved out of historical constructions of nationhood and official nationalist ideologies to become an integral and commonsensical part of Thai national identity. It then considers some of the ideological functions irrigationalism may fulfil and some of the ways in which these are expressed in contemporary Thai society. It attempts to provide a historically situated interpretation of the roots of irrigationalism in the Thai socio-political context. The chapter analyses narrative evidence from a handful of important political actors to illustrate the nature of contemporary irrigationalism and its relationship with closely related ideologies, such as royalism, nationalism, and the seductive ideology of developmentalism. As such, this section partly addresses the first two research sub-questions, namely:

SQ1 What are the probable historical roots and origins of irrigationalism in Thai society?

SQ2 What are the main irrigation development narratives framed by different actors, both historically and in the present context?

5.2 Irrigationism – an outline of the concept

From the conceptual discussion of ideology provided in Chapter 3 (see Section 3.2.1), and some preliminary propositions of how an ideology of irrigation development or irrigationism might prove useful theoretically, we can now move towards a more nuanced understanding of irrigationism set within a specific spatio-temporal context. For this to be achieved, a basic understanding of the historical formation of the modern Thai nation state and certain domestic meta-ideologies is necessary, that links irrigationism to better recognized ideologies of nationalism, developmentalism and monarchism. To this end, I will argue that the phenomenon of modern irrigation development extends far beyond its material or physical dimensions, but also embodies elements of cultural beliefs and norms about the status of irrigation within Thai society, that has allowed irrigation to be considered a “privileged solution” (Moris, 1987) or a “sanctioned discourse” (Allan, 2002), that limits what may be spoken about irrigation and whom may speak, thus ensuring a diminished space for alternative discourses to arise.

It should be noted that well before Adams (1991) coined the phrase “irrigationism” as a synonym for ideologically motivated irrigation development in the context of certain sub-Saharan African nations, a conceptual link between ideological problem solving and decision-making with regards to water resources and irrigation development had been proposed as a significant phenomenon in developing country contexts by Wiener (1972). Wiener made a distinction between an *ideological* approach and a *pragmatic* approach to problem solving in general and around water resources management in particular. The ideological approach was considered rooted in the adoption of “a priori type of principles to an intentionally highly simplified planning space” which were considered related to “broader national, religious, moral or political tenets that have been taken over uncritically from an irrelevant past” (Wiener, 1972:26-7). He believed that the “off-the-peg” development models that accompany the ideological approach have a number of advantages, “such as economy in mental effort, as well as apparent ease of transmittal to individuals *preconditioned* to accepting these models” (Wiener, 1972:27, emphasis added).

Conversely, their main disadvantage is that in the majority of cases they failed to fit the situations in which they were “indiscriminately applied”. A critical aspect about this approach to water resources development is its frequent subjection to “sacred cow principles”, whereby despite the fact that predictions based on the principles fail to materialize, “instead some less hallowed aspect of the planning space is blamed for failure” (Wiener, 1972:27). The pragmatic approach is conceptualized as the antithesis of the ideological approach, where the development planner seeks a definition of the planning space, its problems, dimensions, structure, trends, and constraints, as free from political bias as possible. The development model selected is then deemed to better represent the functional relationship of the planning space and able to predict its responses.

Discourse around irrigation development in Thailand seems to engender a distinctly normative worldview and preconditioned set of beliefs about a natural state of affairs concerning irrigation’s position within an idealized rural landscape and an imagined propensity of Thai citizens to be practitioners of irrigated agriculture (especially rice cultivation) (cf. Rigg and Ritchie, 2002). It also incorporates utilitarian views about the relationship between nature and society and the need to maximise use of available water for agricultural consumption within the borders of Thailand to avoid it flowing away “wasted” to the sea or transboundary rivers (Molle et al., 2009a), pointing towards a *naturalizing* and *universalizing* of beliefs within mainstream narrative accounts. I would argue that such discourse partly stems from rigidly hierarchical and paternalistic views about the structuring of Thai society by the dominant elite (Jacobs, 1971; Rigg, 1991), and as such is culturally contextual and highly value-laden concerning irrigation development’s status and role in wider rural development narratives in a top-down ordering of Thai society. Manifestations of this dominant worldview are discussed in greater detail in this chapter and in Chapters 7 and 9.

I would stop short of claiming that irrigationalism offers an entire worldview (cf. Mannheim’s *Weltanschauung*) or complete ideology, in marked contrast to, say capitalism, communism or socialism. Nevertheless, I maintain that it is a sufficiently distinctive ideology which embodies socio-political “*action-oriented* sets of beliefs” (see Eagleton, 2007) found within Thai society and is influential for guiding the ideas, goals, expectations and actions of large swathes of the population. Moreover,

the distinctly utopian irrigation development plans constructed by elite actors have provided a comprehensive, idealized vision of a future land in the Northeast (e.g. the “Green Isaan” or Water Grid Projects regionally, that provide primordial⁶⁰ connections to a mythical “Golden Land” or *Suwannaphum*⁶¹, incorporated in Thai Buddhist religious symbolism). These development projects embody distinct elements of mystification, illusion and falsity in their discursive outward dissemination from Bangkok to the peripheries of the nation. It forms an integral part of the elements that make up the “imagined community” of Thai nationhood (Anderson, 2006). As such, irrigationalism would seem to satisfy some basic conditions of an ideological formation, for example, as defined by Eagleton (2007), Heywood (1998) and others (see Section 3.2.1).

Irrigationalism, as defined in this thesis, is a dominant ideology of irrigation developmentalism that incorporates utopian notions of agricultural modernism, technocentrism and more primordial nationalistic sets of beliefs, values and actions in Thai society about the potential of irrigation; performing important transformative functions in an elite-oriented project of domination over nature and society.

I now go on to trace the history of the birth and rise of nationalism in Thailand, as this is of pertinence to explanations of the roots of irrigationalism and its relationship with nationalism, agriculturalism and other dominant ideologies. Rather than give a historically detailed account of statist or dominant group attempts to mould a Thai national identity⁶² during the nineteenth century, whether in more elite or popular forms of discourse, I intend to concentrate on emphasising the socially constructed nature of the nationalist discourse in the twentieth century, and examine why particular narratives of relevance to agricultural and water resources development may have been dominated by narrow social groups.

⁶⁰ Primordialism, according to Fong (2009:678), “is conceived as containing socially-constructed nationalist properties that are activated by political entrepreneurs in their machinations to acquire and maintain power”.

⁶¹ According to Keyes (1977), in ancient times the mainland Southeast Asian peninsular was known as *Suvarnaphumi* in India, literally meaning the Golden Country, an allegorical reference used in the title of Falvey’s (2000) book, “*Thai Agriculture: Golden Cradle of Millennia*”.

⁶² Critical scholars of the statemaking and national identity building process in Thailand that offer persuasive accounts of how selected recordings of locations, events and actors in the official historical narrative have served the purposes of the state and dominant elites include Anderson (1991), Chaloeontiarana (2007), Mulder (1997) and Winichakul (1995) amongst others.

5.3 Official Ideologies and elite constructions of “Thai-ness”

Thailand has sometimes been associated with a number of defining state ideologies during the course of the past century or so, including (but not limited to) the following: absolutism, authoritarianism, capitalism, fascism, feudalism, irredentism, liberalism, modernism, militarism, nationalism, monarchism, statism, and totalitarianism. Such ideological labels, often used in a pejorative sense, have been identified as some of the dominant ideologies adopted by the ruling establishment for statecraft purposes in first Siam, and later Thailand⁶³. The most commonly cited mantra identified as the official Thai state ideology has been “Nation, Religion, King” (*chart, saatsanaa, phramahaagasat*) (Chaloemtiarana, 2007), usually credited as a creation of King Vajiravudh or Rama VI (r. 1910-1925), who is reputed to have stated that, “loyalty to the king is identical with loving the nation because the king is the representative of the nation” (Baker and Phongpaichit, 2005), thus firmly intertwining nationalism and royalism in the official state discourse. This trinity of institutions were viewed by elite nation builders as the pillars on which the existence and prosperity of the Thai nation depended, with the king representing the political embodiment of a Buddhist nation and the ordained protector of nation and religion (Connors, 2007). Even today, state officials will often legitimize their actions and authority with references to the ideological troika, symbolically represented in the tricolour national flag.

A recurring pattern during the early decades of the twentieth century was a reliance of state elites on constructed official versions of Thai culture and identity, which amounted to little more than a popular “historical imaginaire” (Samudavanija, 2002). According to Winichakul (1995), there is a widespread assumption in Thai society that a common Thai nature or identity exists, understood in Thai language as “*khwaam ben thai*” (literally meaning “Thai-ness”). Its existence is commonly believed to stretch back into the folds of history and all “Thai” people are supposed

⁶³ Siam officially changed name to Thailand in June 1939, on the grounds that the latter name better corresponded with the race of the peoples of the Thai nation, at a time when Prime Minister Phibun Songkhram had just allied with Japan and wanted to recover an imagined lost “greater Thai empire” (*maha anajaak Thai*) (Baker and Phongpaichit, 2005).

to be aware of its provenance and virtue. King Rama V or Chulalongkorn (r.1868-1910) was instrumental in defining “Thai-ness” by giving new meanings to various royal rituals and processions, and through the construction of symbols that placed the king at the centre of the state, with absolute authority over aristocrats, civil servants and subjects of “all races”, whose lives were deemed dependent on the king’s power, wisdom and generosity, asserts Sattayanurak (2005). Winichakul (1995) argues that maps, like the national flag, have become powerful state symbols of nationhood and (re)producing Thai-ness. Similarly, the creation of symbolic discursive enemies (whether ethnic “Others”, communists, terrorists or indeed, natural disasters like droughts and floods⁶⁴) is an important function of the state apparatus and to the maintenance of its power base and political domination.

Following the genesis of the modern Thai nation state in 1932, a series of military strongmen figures emerged to lead the nation down a predominantly authoritarian path of governance, which pitted the despots in a decades-long struggle against more liberal reformist figures, such as Pridi Banomyong (Baker and Phongpaichit, 2005). The autocratic leaders employed skilful propagandists to undertake the crucial task of forging a unifying Thai national identity, strongly influenced by nationalist ideologies employed in other fascist states. For example, Field Marshall Phibun Songkhram (twice Prime Minister, first from 1938-44 and again from 1948-57) utilized the talents of Luang Wichit Wathakan who was instrumental in creating a new public culture and fashioning notions of “Thai-ness” within a loose nation of disparate ethnicities and social groups, while Phibun’s successor, Field Marshall Sarit Thanarat (1958-1963) appointed M.R. Kukrit Pramoj⁶⁵ as the regime’s chief ideologue in defining new interpretations of “Thai-ness” and legitimating his regime according to “Thai-style governance” principles (Sattayanurak, 2005).

Sarit justified his regime using a political philosophy based on indigenous principles of authority and social hierarchy, a paternalistic style of rule supposedly adapted

⁶⁴ While Winichakul (1995) does not specifically identify natural disasters as a discursive enemy of the Thai state, given the adversarial attitude of the Thai state towards fighting drought and floods as perennial national scourges, there would seem to be a strong case for expanding understandings of the enemy function to also include non-human entities, a concept discussed further in Chapter 6, Section 6.4.

⁶⁵ Mom Rajawong (a royal title) Kukrit Pramoj (1911-1985) was a great grandson of King Rama II and formed the Progressive Party in 1945, which merged into the Democrat Party the following year. He briefly served as Prime Minister between 1975-76 and is better known as a public intellectual, popular novelist and newspaper owner (The Siam Rath daily).

from the ancient Sukhothai system of governance⁶⁶. Instead of placing primary emphasis on loyalty to an abstract state or constitution, (considered inappropriate to the Thai context), Sarit focused on promoting the monarchy, as both a beacon of loyalty for the mass populace and a source of legitimacy for the government itself. Sarit talked about the “Army of the King” and the “government headed by the King”, while the king in return anointed Sarit “Defender of the Capital” on the day of the 1957 coup, notes Baker and Phongpaichit (2005:177). Sarit scrapped a Land Act from the previous government that was unpopular in palace circles, restored royal ceremonies⁶⁷ and encouraged an expansion of the king’s role and interest in rural development. The government became little more than a secular arm of the semi-sacral kingship and was worthy of respect and obedience by virtue of that connection, argues Wyatt (2003). The monarch was restored to the apex of Thailand’s moral, social and political order. Democracy was redefined by Sarit and M.R. Kukrit to mean the responsiveness of the government, the bureaucracy and the monarchy to the people’s needs and aspirations (Wyatt, 2003). Chaloeontiarana (2007) characterized Sarit as a “paternalistic despot” (*pho-khun uppatham baeb phadet-gan*)⁶⁸, who simultaneously represented a father-like figure with benevolent intentions towards his “children” (*prachaachon* or the people), and simultaneously wielded absolute power over his subjects as a feared tyrant. In the latter guise, he frequently ordered the incarceration, torture and execution of criminals, political rivals and communist sympathisers, labelled “un-Thai” for their political convictions⁶⁹.

Under Sarit, the king began to make more trips upcountry to isolated villages, often populated with impoverished ethnic minorities, to begin a tradition of charitable

⁶⁶ This period of Thai history has been idealized by both religious and political reformists as “providing a true Buddhist model of a participatory, liberal form of government”, which was used to, “uphold the true essence of Thainess”, according to Jackson (2002:173).

⁶⁷ One of the revived ceremonies under Sarit’s tenure was the Royal Ploughing Ceremony, a lavish combined Buddhist and Brahminical rite held each May that had ceased since 1932. The king (and more recently the Crown Prince) officiates at the ceremony conducted to ensure a bountiful rice harvest and abundant rainfall for the coming agricultural year. Officials and participants at the ceremony wear period attire from the reign of Rama IV. Fong (2009) describes it as an example of a primordialised royal ceremony used to reinforce the monarch’s sacrality.

⁶⁸ Chaloeontiarana (2007) argues that Sarit’s personality and role as national leader was a complex combination of both paternalism and despotism, leaving a legacy that sees him revered by some Thais and reviled by others. Originating from Mukdahan in Northeast Thailand and with Lao roots on his maternal side, there is an impressive statue and monument celebrating his public life in central Khon Kaen.

⁶⁹ The Thai anti-communist law of the 1930s was culturalized under Sarit, according to Streckfuss (2011:39), and communists were portrayed as those who caused “people to lose their faith in religion or the traditions and customs of the Thai race.”

royal giving funded through imaginative “gifting relationships with various powerful social groups” (Baker and Phongpaichit, 2005:178). He turned to the generals, wealthy officials, growing business interests (domestic and foreign) and the US government to fund development projects, and offered royal decorations and prestige in return. Sarit seemed quite content with the new arrangement of promoting a popular “development king”. In the view of Baker and Phongpaichit (2005:180), “[T]he alignment of army, palace, and business concluded by Sarit under US patronage in 1957-58 benefited all parties. The US secured a base. The monarchy revived. The generals enjoyed power and profit. Business boomed.” Streckfuss (2011) posits that a twentieth century project of Thai-ification executed by elite state groups has been used to build loyalty to official nationalism has gradually become more entrenched over the course of the present king’s reign, in effect freezing Thailand in an official regime of truth and state of “exceptionalism” (refer to Chapter 9). Nationalism can be conceived as part of an “ongoing liberal hegemonic project that works to link people into elite defined visions of national development”, argues Connors (2003:434). Further analysis of the rise of a bureaucratic - monarchical arrangement based on incorporating paternalistic rural development strategies and various forms of nationalism, including agricultural nationalism and irrigationalism are examined in the following sections.

5.3.1 Emergence of a Thai-style agricultural nationalism

At this point, it might be instructive to enquire as to what extent general notions of agriculture and irrigation are integral parts of Thai national identity constructions? Where do they fit in relationship to the well recognized ideologies of nationalism and royalism in shaping discourses of development in Thai society? Thailand has been described historically as a “rice-growing society” (e.g. Ishii, 1978; Sirisai, 1990) and the country is still regularly perceived by commentators as an agriculturally-based nation. Chattip Nartsupha (1999:9), for example, begins his influential book *The Thai Village Economy in the Past* with the simple statement, “Thai peoples are rice-growers”, followed a few sentences later by a quote from the 12th century Chiang Rung chronicles, “wherever there is water, there are the Thai”. Nartsupha’s

writing has been interpreted to promote primordial notions of an endogenous “community culture” (*wattanathaam chumchon*) ideology in Thailand, where the village as a unit remains defiant, but ultimately powerless, in the face of intrusions by a rapacious state and market-based capitalism (Rigg and Ritchie, 2002). According to Rigg and Ritchie (2002), Nartsupha’s arguments were embraced not only by the NGO community, but also latterly, many in the Thai establishment, radical academics and middle classes as a template image of traditional rural communities that can be used to create a contemporary “self-sufficient economy” (*sethagit phor piang*)⁷⁰, in which wet rice farming and communal water resources management play a defining role in the imaginary rural idyll.

In his book, *Thai Agriculture: Golden Cradle of Millennia*, Falvey (2000) argues for the centrality of rice-based agriculture to understanding the emergence of the Tai cultural norms that fostered the development of the pre-modern nation. Control of rice fields and the resident tax paying population provided the early state with the vital resources of food surpluses, revenue and manpower to permit military expansionism, he notes, supporting the interpretations of a number of other authors (e.g. Yano, 1978; Cohen, 1992; Brummelhuis, 2005). Rice cultivation is still seen as playing a central role in community formation, development of civil leadership amongst water managers and forming the foundations of national administrative structures. Falvey (2000:84) notes, “(t)o belittle the links between wet rice culture and Thai culture leads to an erroneous interpretation behind agricultural and developmental change, and even the Thai world-view”. He highlights the range of ceremonies and beliefs in the Tai culture (many of which endure to the present day) that are related to the assumed links between a productive agricultural system and water management, some that are more closely derived from animism and Brahminism than Buddhist traditions. Yano (1978) has conceptualised Thailand, not simply as a rice-growing society (Ishii, 1978), but as a “rice-growing state”, and argues that the complex of traits inherent in such a classical state have partially survived into modern times, if one accepts the presumption of a continuity of history. Scott (2009) goes further and argues that fixed-field grain (i.e. wet rice) agriculture promoted by the state has historically been the basis of its power.

⁷⁰ This utopian philosophy espoused by the king has been systematically incorporated by state planners as a prominent part of the national development vision over the last decade. It is discussed in further detail below.

This historical continuity with the past is tangible through interpretations of the “Ramkhamhaeng Inscription”⁷¹, an iconic symbol of Thai nationhood, taught to every primary school child as a literal description of thirteenth century society that retains contemporary relevance (Mulder, 1997). As a passage from an official biography by The National Identity Board (2000:55) states, “the basis for the great respect shown to Thai sovereigns was laid with the loving paternalistic nature ascribed to the great monarch of the period, Pho Khun Ramkhamhaeng”. The most famous passage from the stone inscription reads:

“In the time of King Ramkhamhaeng, this land of Sukhothai is thriving.
In the water there is fish, in the fields there is rice.”

This apocryphal passage is frequently adopted by a variety of actors⁷² in public discourse, appearing in official publications, books, speeches, TV shows, radio programmes, etc, as historical metaphor for an innately productive agricultural Thai kingdom, linking the categories of water, rice and national prosperity together, under a benevolent patrimonial monarchy. Read as an ideological treatise, it provides the backdrop for more modern interpretations of the fundamental nature of Thai history, culture, state governance system, the monarchy and ultimately, notions of Thai-ness. It has been interpreted as Thailand’s “first constitution” (Pramoj, 1990), and used by elite ideologues to build an image of ancient liberality, where relative freedom, commerce, welfare and responsive government prevailed (Connors, 2008). Yet the provenance of the inscription has been called into question by some historians in recent years to challenge what Rigg and Ritchie (2002:361) described as, “a central column in the edifice of Thai nationhood”, and the mere suggestion that its historical authenticity might be questionable led to threats of litigation, deportation and physical harm against the scholars (Reynolds, 2006).

Building nations around idealized visions of an agriculturally-based society under a benevolent king and ruler has ancient precedents in China, where according to Sellman (2002:76) “the means by which the early sage kings led their people was to put agriculture before all other affairs.....the reason why Hou Ji undertook agriculture

⁷¹ The Ramkhamhaeng Inscription refers to text found on a stele discovered in Sukhothai during the reign of Rama IV (1851 – 1868), supposedly dating back to 1292.

⁷² These have ranged from government officials, Thai academics, to staff of domestic and international NGOs engaged in Thailand (personal observations). Rigg and Ritchie (2001) maintain it adorns the opening pages of more books on Thailand than any other single quote, a position I would be inclined to concur with.

was because he considered it to be the root of instructing the masses”. Associated with peasant utopian communitarianism and egalitarianism in early Chinese agrarian philosophy, the ideology of “agriculturalism” has also been termed the School of Agrarianism (Deutsch and Bontekoe, 1997). It was based upon a notion of “people’s natural propensity to farm” and resonates with associations of irrigated agriculture to civilization and a *moral ideal of farming*, noted in several other examples by Molle et al. (2009d:331). I would argue that under King Bhumibol’s symbolic, spiritual and paternal guidance, the Thai state has shown a strong preponderance towards ideologically advocating a return to agriculturalism, despite an empirical socio-economic divergence from its past, of which irrigationalism is a vital component. The primordial elite fascination with constructing an imaginary agricultural nation is tangibly expressed in many contemporary state programmes and policies, perhaps the most profound of which has been the royal-backed philosophy of Sufficiency Economy⁷³, which has been incorporated into the last three National Economic and Social Development Plans (Intravisit, 2005; National Economic and Social Development Board, Undated), but also includes a bias towards promoting a irrigation development paradigm. Further, I would posit that irrigational worldviews form an indispensable link with utopian agriculturalist visions, with implications towards collective national self-identity and the public imagination regarding development pathways (cf. Anderson, 2006).

Indeed, elite constructed images and narratives of irrigated rice farming in Thai society as a morally virtuous and indispensable part of the national psyche are commonplace (Rigg and Ritchie, 2002). For some scholars, this is not just a case of “the state imposing its own notion of people’s identities on rural inhabitants”, however, as often urban dwellers working in a factory or hotel throughout Southeast Asia will identify themselves as rice farmers and villagers, points out Rigg (2003:197) allowing for an agency-related explanation. Indeed, I encountered a version of this phenomenon during fieldwork, when taxi drivers and other industrial or service sector workers met in Bangkok, still described themselves as *chao naa* (rice farmers) or *kasetagon tamada* (ordinary farmers), even when they had not sown or harvested rice for many years and their main connection with the village was an

⁷³ For critiques of the Sufficiency Economy philosophy both practically and rhetorically, refer to works by Walker (2010), Isager and Ivarsson (2010) and Intravisit (2005).

annual trip “home” over New Year holidays. However, a more structurally oriented analysis might suggest that the individual’s identification as a rice farmer, even when patently not their main occupation, could be explained by the existence of a dominant ideology producing an “imagined community” of primordial rice farmers as part of a distinctly nationalist discourse.

5.3.2 *Muang fai* irrigation and Thai nationalism

Irrigated agriculture is one of the “stereotypically core elements of Thai national culture”, asserts Walker (2003:943). Perhaps there is no other agricultural technology and social practice in which constructions of Thai nationalism are more clearly articulated than in narratives surrounding the system of irrigation found in northern Thailand known as “*muang fai*”⁷⁴. As argued in Chapter 2, these have often been idealized as evidence of an unbroken record of community-based irrigation practices stretching back over seven hundred years, when the nation’s first irrigation laws and regulations were codified in what Surarerks (2006) refers to as “*Mangrai Sart*”⁷⁵, after the monarch of the day. Present day laws and regulations known as “*sanya muang fai*” are supposedly descended from the older codes, detectable in the wording of the People’s Irrigation Act of 1939 and the National or State Irrigation Act of 1942⁷⁶, maintains Surarerks (2006). They are portrayed, in Surarerks’ (2006) description, as localized and democratic decision-making systems that symbolize an innate and ancient Thai skill and ability in water resources management, that offer reassurance about local communities holding out against the advances of modernization. According to Ounvichit (2005), the *muang fai* weirs and water distribution canals were built and maintained communally because investment in a weir was beyond the capacity of an individual household and therefore communal cooperation and coordination over water allocation decisions was a necessity.

⁷⁴ Refer to Chapter 2, Section 2.2.2, for an articulation of debates over *muang fai* governance systems with respect to hydraulic society theory.

⁷⁵ Punishments for certain offences were reportedly severe. For example, “non-participation in the cooperative work of maintenance of the irrigation system while secretly taking water for private use was considered a grave crime against society and was punishable by the state. The prescribed punishment for a first offender was clubbing about the head or a fine of 110 *ngoen*; for a second offence it was death. Such was the state authority in the management of irrigation” (Ishii, 1978:23).

⁷⁶ Both these laws, although updated somewhat since, form the basis of Thailand’s present irrigation legal code.

In the modern context, the *muang fai* model of irrigation has frequently been portrayed as a resilient example of “polycentric governance”, community cooperation, local wisdom and social cohesion (e.g. Tan-Kim-Yong et al., 2005); masking a more complex reality, argues Neef (2008). In contrast to the popular view concerning devolved *muang fai* systems, Cohen (1992) argues that the state has substantially intervened in controlling this form of irrigation and circumscribed peasant autonomy to extract surplus at various times, particularly during the nineteenth century on royally accumulated lands. Hirsch (1997) asserts that *muang fai* narratives act as an “ideological base” for indigenous environmentalism, given its identification with local, traditional and ecologically-sound approaches to natural resources management. Perversely, the narratives have also been co-opted by elements within the hydrocracies seeking to strengthen legitimacy claims for a historical monarchical role in national irrigation development. In this way, the discourse tends to feed nationalist sentiments of a latent Thai superiority in decentralized water resources management practices that closely matches the dominant ideology of irrigationalism. As Molle (2003) contended, there has been a tendency by defenders to extrapolate the scale, geographical setting and historical context of *muang fai* systems to other locations, even including large state-run irrigation schemes, leading to misconceived analyses.

Thus, I would argue that *muang fai* irrigation systems represent the epitome of utopian constructions of Thailand being an agricultural nation at heart and Thai people essentialized as default communitarian wet-rice irrigators, that remains one of the core worldviews of officially-sanctioned Thai-ness. Simultaneously with the widespread promotion of an imagined traditional past and constructed present based on elite claims of farmers forming the “backbone of the nation”⁷⁷, is enacted the apparently contradictory state project of modernization and development. In the late twentieth century, nowhere was this repeated elite claim more apparent than in the “arid and impoverished” Northeast region (more detailed discussion is provided in Chapter 5), where it was ordained that modern development, symbolized most forcefully by roads and irrigation infrastructure construction, would “increase

⁷⁷ According to Rigg and Ritchie (2002), Thai children are taught from their earliest years in school that farmers represent “the backbone of the country”, along with the special character of farmers, farming and rural areas. They give two salient examples in northern Thailand of post-productivism and consumption of rural landscapes by urban elites to recreate an idealised past for modern corporate profit.

production and make the farmers happy” (Chaloemtiarana, 2007:168). I now turn considerations of how the modern state mission of “development” expressed itself through adoption of an irrigation development discourse within a broader ideology of development.

5.3.3 Rise of a development ideology – developmentalism

This section offers some brief reflections on how Thai-style developmentalism emerged as an important state ideology in the latter half of the twentieth century, and more specifically, some reasons for the enduring primacy of an irrigation development discourse within the wider ideological framework. I begin by sketching possible historical origins of “developmentalism” in modern Thailand. It has been proposed by Nartsupha (1999) that modern developmentalism in Thailand commenced during the regime of Field Marshall Sarit Thanarat, a period characterized by “developmental authoritarianism” that served the interests of a “parasitic capitalism”. Similarly, London (1977) argued that the state’s strategy in the Northeast provided a prime example of what he called “development as social control”, defined as a form of “neoparasitism”, reflecting the dominance and needs of a Bangkok-based elite in defining and determining what kind of development was provided to the periphery. Sarit promoted development “both as an economic goal to be pursued and an ideology on which the legitimacy of the government was based”, in the words of Keyes (1989:76). The two basic ideological tenets of Sarit’s regime were the notion of *pattiwat* (loosely translated as “revolution”) and *pattanaa* (meaning development or modernization), argues Chaloemtiarana (2007). Sarit’s *pattiwat*, however, was at variance to Western concepts of revolution that involve major social, political and economic reforms, but was more closely equated to “reactionary”, insofar as it was used to encourage political atavism. A new political orthodoxy emerged under Sarit, based on a three-tier socio-political system defined in terms of *rat/rattabaan* (state/government), *khaaraatchagan* (bureaucracy), and *prachaachon* (the people). Sarit’s policies and development programmes became part of a political system, “aimed at maintaining the boundaries between hierarchical

sectors while the process of *pattanaa* was applied; *pattanaa* was meant to reinforce *pattiwat*” (Chaloemtiarana, 2007:9).

A number of scholars have given prominence to the influence of a strongly state-led “developmentalism” ideology on cross-scalar societal transformation in rural Thailand. Hirsch (1990), for example, believes that it supported the penetration of the village by the state and capital that precipitated a reorientation of power structures and changes in the relations of agrarian production. He argues that apart from a traditionally virulently anti-communist stance, the most obvious element of the Thai state’s development ideology was a rhetorical call for modernization⁷⁸. In agriculture, this implied a shift from subsistence oriented production towards more capital and external input-based farming, which included the intensification of irrigation use and a shift away from an ill-defined, rain-fed agriculture⁷⁹. Hirsch (1990:12), adopting the language of neo-Marxism, summarized state rural development ideology as one, “that promotes capitalist transformation and state penetration as a path from poverty to prosperity, from isolation to integration, from backwardness to civilization.” An emphasis on water resources development strategies has been at the forefront of the state’s rural development ideology for over a century, argues Sneddon (2000). He takes a stance that the Thai state’s prevailing philosophy with regards to regional development is one that privileges rapid capital accumulation (primarily at the national and trans-national levels) and enhances government legitimacy. As a result of state-initiated development’s penetration into the village sphere, there has been a fundamental transformation of village institutions and social relations, laying the groundwork for adoption of state functions and monetized relations. In some respects, development in Thailand assumed the discursive mantle of “civilization” and became a master trope - “a master discourse with its theory, practice and institutional location”, argued Turton (1991:5)

⁷⁸ Modernization theories usually outline development in terms of a progressive transformation towards technologically more complex and integrated forms of modern society (e.g. Long and Long, 1992).

⁷⁹ What the state defines as “rain-fed agriculture” would quite closely align with Wittfogel’s definition of hydroagriculture, which may include many types of small-scale irrigation, essentially ignored by the state’s narrow purview, as noted in Chapter 2.

5.3.4 Sarit and water resources development

In this section I argue that under the self-styled autocratic and paternalistic “*pho-khun*” regime of Field Marshall Sarit, a model of development was promoted that stressed above all else the construction of roads and water resources infrastructure, supposedly for alleviating rural poverty and modernizing the nation. The same ideological model has more or less remained intact ever since the early 1960s and still essentially forms the basis of national and local development policies and practices for the rural periphery. The resilience and longevity of the associated discourse is quite remarkable under the circumstances and it is suggested that its foundations are grounded in the same elite constructions of Thai nationhood alluded to in the previous sections.

Sarit devoted much of his early Prime Ministership to drafting and promulgating a National Economic Development Plan (NEDP) and made it clear in public speeches that his “revolutionary” government was committed to national development, albeit conditioned by a highly conservative outlook on Thai society, notes Chaloehtiarana (2007). Following an initial inspection tour of Northeast Thailand between 28 March to 12 April, 1960 “to see for myself the *true* conditions of the country”⁸⁰, Sarit returned to Bangkok convinced that the two most urgent needs of the population were increased water resources and road infrastructure. Chaloehtiarana (2007) states, “[I]n all his other speeches made after inspection tours, these two necessary conditions for development were always mentioned.” Regarding the importance of water resources and linking it to imperatives of local health and prosperity, Sarit declared:

“Water is a very important problem. I have noticed that in provinces where there is an abundance of water, the people in those provinces have bright faces, fresh and clean skins, and plants and food flourish, resulting in the prosperity of that province.”

(Speech by Sarit Thanarat on April 12, 1960, cited in Chaloehtiarana, 2007:153)

⁸⁰ It should be noted that this visit coincided with the height of the hot and dry season when visible water resources would naturally have been at their most scarce, and the impression gained would have been quite different from a visit made a few months before or after.

Interpreting this narrative of inter-linked water abundance and prosperity (and its corollary), one could easily picture how the desiccated provinces of Northeast Thailand, viewed through the distorted lens of a late dry season visit, would have presented a stark contrast to the green, fertile and water-rich lower Chao Phraya delta, or indeed much of the Central Plains, the South and the North of Thailand for members of an urban-based, bureaucratic elite (see Chapter 6 for more detailed analysis of water scarcity constructions of the Northeast). Turton (1991) observed that development in Thailand is often equated with notions of “civilization” (*khwaam ben sivilai*) and “prosperity” (*khwaam jaroeun*), and that an isolated rural village lacking good roads, electricity, telephone links, tap water system and a modern irrigation system, would represent the corollary of these material indicators. Moreover, Sarit was well known for his rhetorical love of “cleanliness and orderliness” (Wyatt, 2003:280) and issued several edicts designed to instil these desirable characteristics in the population (Yano, 1978). Hence, it is not difficult to envisage that orderly, straight canals and hierarchically-managed irrigation systems of the Central Plains in which everyone contributed according to their ordained station, would have been emblematic of a higher aesthetic for the nation than chaotic hydroagricultural systems that dominated in the Northeast (cf. Scott, 1998). Simply stated, scientific, double-cropped rice irrigation methods provided a vision of order, progress, civilization and productivity over the chaos of uncultivated wetlands, jungle (*paa thuan*) and uncivilized unproductive “rainfed” or upland rice farming practices predominating in the Northeast; similarly reflected in early twentieth century Western visitors’ regional narratives (see Chapter 6, Section 6.5).

Regarding agricultural development priorities, Sarit expressed few doubts that the government’s development policies and plans should concentrate on nurturing contented peasant farmers to play the vital roles of feeding and propping up the nation from the bottom rung of the social hierarchy. Constructing larger and greater numbers of state irrigation systems was an integral part of a strategy to achieve his utopian goals. Below is an excerpt from a speech Sarit made to members of the Farmer’s Youth Organization:

“In the past, we held the belief that the life of a farmer is a lowly lot, without any chance for progress or wealth. But now, conditions have changed immensely. The study of agriculture has progressed to the

point where farming can produce wealth and happiness. The world has given agriculture more prestige; nations attest that farmers are the most important sector of society constituting the nation's backbone, the nation's nourisher.....The government, and myself in particular, have given great consideration to the farmer, we are improving and supporting agriculture by carrying out irrigation and water supply programs, by improving and creating transportation facilities, improving public health, and carrying out community development projects to increase the return farmers earn from their labor."

(Speech by Sarit Thanarat on 4 May, 1960, cited in Chaloehtiarana, 2007:153)

As previously noted, narratives constructing farmers as the "nation's backbone" have remained commonplace to the present and may be heard in the speeches and texts of state leaders, bureaucrats, politicians and local leaders; and indeed were occasionally encountered during fieldwork interviews (see quote in Chapter 8, Section 8.5.2). However, Sarit's views were not simply an expression of home-grown nationalist fervour for modernization, progress and prosperity by extending benevolent state-led developmentalism out to the margins. They should also be understood in the context at the time of a growing national and regional securitization discourse, embedded in the ideological and material concerns of Cold War geo-politics and the politics of foreign development aid.

5.3.5 United States influences on Thai developmentalism

Thailand, of course, was not an island and Sarit's regime coincided with the rapid expansion of economic and strategic interests of the United States and Western allies in promoting a dogma of free-market capitalism, accompanied by efforts to contain perceived threats posed by the spread of communism across East and Southeast Asia. After the end of World War Two, the US government cultivated Thailand as a close regional ally and client state within the "free world" camp of nations. To maintain its regional hegemony, it concentrated on reviving and strengthening military rule in Thailand, which had faltered during the domestic political instability of the late

1940s and early 1950s⁸¹, with the frequent leadership changes raising questions about the loyalties of certain factions to liberal democracy and Western values (Baker and Phongpaichit, 2005). Sarit, in contrast to his fascist-leaning predecessor Phibun, promised a more Western-oriented regime by welcoming a World Bank mission to Thailand soon after his first coup. The World Bank, through its International Bank of Reconstruction and Development (IBRD) arm, became a key player in securing US interests by financing development aid programmes and designing a parallel plan to that of the Thai government's National Economic Development Plan (1961-1966). It was instrumental in establishing a new bureaucratic structure for promoting development, including a planning board (the Board of Investment), a budget bureau, investment promotion machinery and a restructured central bank. The Thai ruling circles were quick to realize that their previous strategy of regional exploitation and neglect was potentially counter-productive and they turned to embrace the international ideology of developmentalism as much out of self-interest as any welfare concerns towards the subjects of development in the Northeast (London, 1977). It did imply, however, that the periphery was no longer seen as marginal to elite interests and a greater degree of reciprocity resulted.

While Sarit's initial vision for national development emphasized achieving *gan pattana* through public welfare and infrastructure development projects focused primarily on "roads and water", as the security situation in Indochina changed, so Sarit's government felt more obliged to accommodate the regional concerns of the US government, both as an ideological ally, but also as a willing recipient of vast quantities of development and military aid (Baker and Phongpaichit, 2005; Chaloemtiarana, 2007). Hence, there was a discernible shift in the national development plan from a primarily domestic orientation to laying far more emphasis on national and regional security in light of the spread of communism. Thus, the previously neglected Northeastern provinces facing Indochina subsequently became the areas receiving greatest state attention, with improvements in communications and water resources infrastructure a top priority. Much of the aid was initially channelled to and through the Thai armed forces (Chaloemtiarana, 2007), and

⁸¹ Between August 1945 and April 1948 alone, there were seven changes in Prime Minister and nearly as many coup d'états.

implemented under the guise of “rural development”, which was then used to support a government programme of suppression, stabilization and counterinsurgency (London, 1977).

Examining the spending priorities in the government’s national economic development plan and that of the IBRD (see Table 5.1), it is interesting to note how the plans differed in several key aspects, with apart from the significant difference in spending on “Industry” (the US preferred the private sector to lead industrial investment), perhaps one of the most striking disparities being a three times greater proportional budget allocation request for the “Agriculture and Irrigation” sector in the Thai NEDP. While some sectors were roughly similar (e.g. Communications and Social Welfare), the Thai planners evidently placed far more emphasis on the importance of agriculture and irrigation investment than their IBRD counterparts, of which the vast majority would surely have been invested on irrigation infrastructure development (as is the case in the present day with RID which still secures approximately half of the MoAC’s annual budget)

Sector	IBRD	%	Thai NEDP (1961-66)	%
Agriculture and Irrigation	255	9	542	28
Industry	50	2	267	14
Energy	620	22	-	-
Communications	1,035	38	617	33
Social welfare	483	17	346	18
Public works	330	12	128	7
TOTAL	2,773	100	1,900	100

(Source: Adapted from Chaloemtiarana (2007:169)

Table 5.1 Comparison of IBRD and the Thai government’s Six Year Plan for expenditure, 1962 (in millions of US dollars⁸²)

According to Chaloemtiarana (2007), 52 % of the United States Operation Mission (USOM) funds between 1951-1962 were spent on roads, compared to 9.5 % on agriculture / irrigation, while Thai government counterpart funds were primarily targeted towards “social welfare” (49 %), followed by “agriculture and irrigation”

⁸² Chaloemtiarana’s (2007:169) Table 5 from which this data is taken gives the budgetary unit as “thousands of dollars”, which is likely to be far too low by several orders of magnitude, so I have adjusted this to millions of dollars, which I believe more truly reflects the budget figures indicated.

(28 %), matching the proportional figure in the NEDP data above. By 1964, with increasing influence over Thailand development strategies by the US government⁸³, spending on communications had slumped to just 1 % of the total, while the top two priorities became social welfare (51 %) and community development (39 %), with “agriculture and irrigation” slipping to just 7 % of the total budget funds (Chaloemtiarana, 2007). Nevertheless, data provided by Floch et al (2007), shows that a US Bureau of Reclamation (USBR) “Northeast Thailand Tank Project”, which ran between 1951 – 1963 building storage reservoir irrigation systems in conjunction with the RID increased irrigable area from near zero to about 40,000 ha in the space of twelve years.

One strand of regional developmental critique has linked the rise of irrigational-type thinking in Thailand to the hegemony of the United States hydraulic mission, in particular the USBR and the Army Corps of Engineer’s efforts to regulate the Mekong mainstream, whom it is claimed, “transplanted their ‘culture of irrigation’ to Asia, particularly to Thailand where American influence was greater” (Molle et al., 2009a:271). However, such a position would presuppose that such a “culture of irrigation” did not already exist in Thailand and the US technical and financial assistance was the precursor of a societal appetite for irrigation technology and discourse. This may well be the case, at least as far as the technological possibilities of irrigation expansion opened up by US assistance and the seemingly limitless use of water resources provided by the vast hydraulic schemes of the American West (Reisner, 1986; Worster, 1992), but taking a less Occidental view of history, might suggest that the Thai irrigational ideology had much stronger links with Indian and Chinese variants of hydraulic society and irrigationalism that far predated any mid-twentieth century Western ideological imports. Indeed, these are the states which nurtured two of the cradles of hydraulic society proposed by Wittfogel (1957) and historically have been far more influential to Thai society in terms of culture.

This is not to dismiss or underestimate the impact that several decades of Western cultural, technological and economic hegemony had on fervently nationalistic leaders during the post-World War Two decades of developmentalism, but it does

⁸³ Between 1950 and 1970, Thailand was reported receiving \$615.7 million in foreign loans, of which the World Bank was the largest donor (56.3 %) and the US government the largest bilateral donor nation (15.9 %). Against this, the US government provided \$403.6 in technical assistance to Thailand or 78.2 % of all grants in the same period (Floch et al, 2007).

raise questions about the degree to which irrigationalist thinking was “transplanted” from outside Thailand’s borders or was already a latent force that just required the right catalyst (mostly a mixture of political will, capital and technical expertise) to be realized. Perhaps it would just be fair to surmise that the US-exported variant seeds of hydraulic society and irrigational discourse fell on fertile ground when transplanted to the awakening hydraulic state of Thailand, given its historical past, especially given the cover that the Indochina War and threat of communism provided to the Bangkok-based elite to cement their control in the Northeast, partly using irrigation development “to win hearts and minds”⁸⁴ (cf. Biggs, 2006).

5.3.6 A static discourse in a changing world

Interestingly, if the Cold War era economic development data is compared with contemporary budgetary spending priorities at both central and local government levels some recurrent patterns emerge, albeit set within quite different geo-political and economic contexts. To illustrate the point, I refer to aspects of the national budget allocation patterns of the 2008 - 2011 coalition government of Prime Minister Abhisit Vejjajiva⁸⁵. The Democrat Party-led government introduced an economic stimulus programme, known as the *Thai Khem Kaeng* Programme (see Footnote 12, Chapter 1), that was anticipated would kick-start the faltering economy by channelling funds to both local development projects in the provinces through various ministries and to large-scale infrastructure “mega projects”, principally transportation, water resources and energy development. The entire scheme, reportedly worth over US\$ 30 billion in May 2009⁸⁶ (see Table 5.2), required the government to borrow funds from domestic debt markets and by entering into public-private financial partnerships, supplemented by the regular national budget funds (Asian Development Bank, 2010). In rural areas, a rapid expansion of roads

⁸⁴ This phrase is most closely associated with Lyndon B. Johnson (US President 1963-69) who frequently used it in speeches to indicate that America should use soft power techniques, including infrastructural development programmes, alongside tools of violence and coercion to bring Third World citizens under its sphere of control.

⁸⁵ Abhisit Vejjajiva, as leader of the Democrat Party, rose to the Prime Minister’s post after a prolonged period of political instability, following the military coup of September 2006 and a series of short-lived premierships marking the return of the military to prominence in political affairs.

⁸⁶ By October 2009, the stimulus package was reported to have increased to 1.43 trillion baht (c. US\$ 42 billion), which represented 5 % of GDP per year, according to an Asian Development Bank report (Asian Development Bank, 2010)

and irrigation projects was seen as a top priority for providing a short-term employment fillip and a long-term boost to productivity, thereby boosting GDP growth and reducing poverty. Water resources and agriculture projects received the second largest share of the planned budget, and although it was uncertain exactly how much funding was earmarked directly for irrigation projects, other proxy indicators at the macro and micro-scales suggest it was probably most. Such budgetary allocations tend to validate the timeless nature of Sarit's narratives concerning the importance of water resources and roads for national development, at least in the discourse and practices of national scions, whether in the executive or legislative branches.

Economic Sector	Budget allocated (million baht)	\$ equivalent⁸⁷ (million US\$)	%
Transport and logistics projects	571,523	16,329	53.6
Water resources and agriculture projects	238,515	6,815	22.4
Education projects	137,975	3,942	12.9
Public Health projects	99,399	2,840	9.3
Basic tourism infrastructure development	18,537	530	1.7
Total budget	1,065,949	30,456	99.9

(Source: Website of Krungthep Thurakit:

http://www.bangkokbiznews.com/2009/05/07/news_28695623.php?news_id=28695623

Accessed 7 May, 2009 and translated by author)

Table 5.2. Approved government expenditure for the “*Thai Khem Kaeng*” Economic Stimulus Programme, Phase 2 (2009-2012), listed by economic sector.

Such budgetary priorities biased towards infrastructure development is not solely restricted to the national level, but is mirrored right down to local levels of government, especially the Sub-District or Tambon Administration Organizations (TAO)⁸⁸, with roads tending to attract an even greater proportion of the overall budget. Such a characteristic is not in the least anomalous with the structure of a hydraulic society, but indeed was regarded as a defining feature by Wittfogel, where

⁸⁷ The currency conversion is based on an approximate rate of 1 US\$ = 35 baht in May 2009

⁸⁸ TAOs (*Ongkan Borihaan Suan Tambon*) are local government entities that were established under a national agenda of decentralization following the 1999 Decentralization Plan and Transition Act. TAOs are tasked with administration at the sub-district level, made up of elected legislative and executive branches that reports to the Local Administration Department, under the powerful Ministry of Interior.

the agro-managerial state as a whole were seen as “great builders” of both hydraulic and non-hydraulic structures (see Chapter 2). To illustrate this significant hydraulic society-oriented characteristic (and I believe the pattern is broadly reflective across rural Northeast Thailand), I have selected one out of the three sub-district localities in which my research was situated as an example, namely Naa Hua Bor Sub-District, Phanna Nikhom District, Sakon Nakhon (Table 5.3). The category headings shown are used by local authorities (TAOs) in accordance with nationally determined priority strategies, with the category “Basic infrastructure development” used to denote infrastructure construction projects. In Naa Hua Bor Sub-District 65.5 % of the entire planned 86 million baht budget for 2009-2012 was devoted to the construction of such projects, with “Management of good local development” (12.1 %) and “Public health development” (6.2 %), coming in a poor second and third places respectively. “Natural resources and environment development” projects were allocated a paltry 0.4 % of the budget by comparison. Every strategy is couched in terms of *gan pattana* (development), which often implies some form of physical construction is required to be considered genuine *gan pattanaa*, in the mindsets of local officials and politicians (refer to Chapter 8 for examples).

Strategy	Number of projects	Budget (million baht)	US\$ equivalent ⁸⁹	%
Basic infrastructure development	214	56.603	1,664,794	65.5
Poverty eradication	55	2.666	78,412	3.1
Economic development	30	2.530	74,412	2.9
Human resources development	148	4.771	140,324	5.5
Tourism development	50	3.772	110,941	4.4
Management of good local development	67	10.455	307,500	12.1
Public health development	41	5.347	157,265	6.2
Natural resources and environment development	8	0.330	9,706	0.4
TOTAL BUDGET	613	86.474	2,543,353	100

(Source: Naa Hua Bor Sub-District Administrative Organization, 2010)

Table 5.3. Naa Hua Bor Sub-District Administration Organization (TAO), Sakon Nakhon province, strategic budget plan for period 2009-2012

⁸⁹ Based on an exchange rate in June 2009 of approx. 34 B / US\$

Within the category “Basic infrastructure development”, when disaggregated (Table 5.4), the proposed projects for budget allocation locally indicated that 70.8 % was ear-marked for building roads, associated drainage structures and their maintenance, followed by “water resources development” (including both agricultural and domestic supplies) at 15.5 % and “electricity and telecommunications system” development at 13.7 %. It should be stressed that examination of the TAO budget plans for all three case study sub-districts reflected similar spending priorities.

Development target	Number of projects	Budget (million baht)	US\$ equivalent⁹⁰	%
Road and drainage pipe construction and maintenance	92	40.092	1,179,176	70.8
Electricity and communications system development	48	7.760	228,235	13.7
Water sources development for agriculture and domestic consumption	74	8.751	257,382	15.5
TOTAL	214	56.603	1,664,794	100

(Source: Naa Hua Bor Sub-District Administrative Organization, 2010)

Table 5.4 Naa Hua Bor TAO budget plan for implementing the “Basic infrastructure development” strategy (2009-2012)

An overview of the water resources development projects listed in the sub-district development plan for Naa Hua Bor TAO indicated that the majority were described as “dredging projects”, apparently to widen and deepen streams, ponds and other water sources for consumptive use, that ranged in cost from 100,000 baht up to two million baht per project, and the construction of a number of “weirs”, identically priced at 200,000 baht each (Naa Hua Bor Sub-District Administrative Organization, 2010), suggesting none of these projects had been actually field surveyed or quantified in advance of inclusion in the plan, but followed an external agency-driven logic of one-size fits all cost estimation where the environment is required to accommodate a given technology, irrespective of suitability and “fit” (see Chapter 8, Section 8.5 for an example of this policy in practice).

⁹⁰ Based on an exchange rate in June 2009 of approx. 34 B / US\$

The similarity in development sector spending priorities of government organizations from national down to local levels indicated in the cases above reflects a certain determinism in development discourse and practice that reinforces claims of a certain fixity or atavism in state approaches to development. And as pointed out by one civil society critic of state water resources development policies, local officials tend to share the same mindset as those at the centre, so it makes little difference to the development outcome which agency implements the project, as the actors all share the same basic ideology.

“....concerning water issues, decentralizing power from the centre to Tambon Administration Organisations, up to now has only occurred to a certain extent; that is only with regard to small-scale water resources. But this has provided no benefits at all, as following decentralization, TAO officials still think exactly the same way as people at the central level. That is, the TAOs have projects in villages, right, but if they still are unable to develop small water resources according to the needs of local villagers in the local area, it makes no difference whether it's the TAOs work or that of a central agency. It's still the same.”

Souce: Montree Chantawong, Project for Ecological Recovery,
Interviewed 19 November, 2009

This phenomenon would tend to support a view expressed by Jacobs (1971) that Thailand is a state that has modernized, without undergoing genuine “development” (i.e. meaning in the civil society and political spheres). Although this analysis was made forty years ago and clearly Thailand has undergone massive socio-economic transformations since that time, in terms of water resources development it would appear the old values and beliefs concerning state-centric development prioritized towards roads and water resources infrastructure (particularly irrigation) development, have stubbornly persisted. Seen as “technologies of power” (Foucault, 1980) both roads and irrigation systems have played a crucial role as key tools of control used by rulers of hydraulic society in strategies to capture the hearts and minds of the “Others within” (Winichakul, 1995) under a strong, unified paternalistic developmental state, that extends beyond any utilitarian or productive functions they may possess.

State-led irrigation is a technology par excellence for furthering the project of state simplification and legibility (Scott, 1998), especially when employed in combination

with road construction and assorted technologies of agricultural intensification and modernization foisted on the periphery from the centre. However, there is a key difference in the intrinsic nature of these technologies. While roads are generally used by a large proportion of the population at whatever scale they are constructed and so could be conceived as relatively democratic technologies in terms of access (with some exceptions where they may be exclusive), the same cannot be said for state-built irrigation systems. Irrigation systems, due to topographic and hydrological limitations and the facts of land tenure patterns, inevitably will generally only ever supply water to a proportion of the rural population and then often highly inequitably amongst users due to a plethora of factors concerning the realities of water allocation (e.g. Burns, 1993; Molle, 2003; Mollinga, 2003); irrigation systems can appear to represent the antithesis of roads in terms of access and equity. In the vast majority of cases of state irrigation systems the author has witnessed throughout Northeast Thailand (and all systems may be considered state systems, regardless of scale), irrigation can be considered a rather exclusive technology, with more people excluded from access than included (see case studies in Chapter 8 for examples). The dominance of the irrigation development discourse perhaps remains all the more surprising and challenging to explain in rational instrumental terms, without recourse to alternative explanations including societal power relations, given the profound agrarian shift that has patently occurred and is still ongoing in Thai society, noted by Rigg (2001, 2003; 2005), Hirsch (2002) and others.

5.4 Irrigation constructed as “*chonla-prathan*” – free water gifted from the king

An important conceptual issue that affects the societal status of irrigation and understandings thereof, regards the semantics of irrigation development discourse, namely that the term commonly used to refer to “irrigation” within Thai society - “*chonla-prathan*” – and its links to the monarchy (Molle, 2003). *Chon* or *chonla*, is a noun derived from the Pali-Sanskrit language meaning “water”, while *prathan* is a royal verb meaning “to give, offer or bestow” (Rigg, 1992). Irrigation water is popularly understood for many Thais as a royal handout, given with characteristic

benevolence from the monarch to the people⁹¹, with the state agencies just an intermediary. However, this nomenclature for public irrigation is a relatively modern state construction. In the early part of the twentieth century, irrigation was known in Central Thai as *thot-nam*, and indeed the irrigation department after 1910 was known as *grom thot-nam* up until the 1930s, when it became the present *grom chonla-prathan* or Royal Irrigation Department (Brummelhuis, 2005). This modern linguistic construction has had far-reaching implications about how irrigation is perceived by the mass populace and partly explains how the hydraulic bureaucracy has been able to command the irrigation discourse and material practices, why people are so reluctant to pay a fee for irrigation water (as opposed to domestic water supplies, for example) and why irrigation development remains a social domain that is closely associated with a benevolent monarchy. The gifting element also implies that there must be some reciprocity, whether in terms of gratitude shown to the gifter (and his proxies) or more complex forms of power relation inherent in patron-client relationships that will become more apparent later (see Chapters 9 and 10 for further discussion). The roots of this relationship between gifter and giftees can be traced back to pre-modern times.

According to Molle (2003:229), providing water in Thailand is “traditionally the prerogative of the king, who mediates its supply from supernatural forces.” This relationship can tentatively be traced back to the “theocratic hydraulic” regime of the Angkor Empire, which was an influential antecedent of the Sukhothai kingdom in Thailand, in which water was controlled more for domestic and symbolic or religious purposes than for irrigated agriculture (van Liere, 1980; Falvey, 2000). Van Liere (1980) draws attention to the efforts of the Khmer kings as incarnate *deva raaajaa* to recreate heaven, as conceived in Indian cosmology, on earth. From a replica of Mount Meru at the centre (Angkor) surrounded by a complex of temples and moats, the divine kings were able to mobilise pools of labour to build a vast network of canals, reservoirs (*baaray*) and roads, seemingly undeterred by local undulations in topography. Where water supply was scarce, it would have likely been reserved for sacral purposes and local people had no automatic right to the water, but rather it was

⁹¹ One interviewee, a former provincial head of the Nakhon Phanom Agriculture and Cooperatives Office, described it thus: “Irrigation in Thai, if you translate directly in Thai, means ‘free’. Because ‘*chonla*’ is the water and ‘*prathan*’ is the free gift. It’s a gift from the Royal Family. Gift from the King. So, ‘*chonla-prathan*’ means free. Free water” (Source: Interview with Sansonthi Boonyothayan, 24 November, 2009).

gifted to them from the king as a symbolic resource, as in the case of Tamil Nadu (Mosse, 2003). Following Mosse's (2003:55) interpretation, "understood in terms of kingly acts of gifting, royally instituted grants and privileges, this landscape of tanks and channels is a representation of order and authority in rural society; a spatial order like others such as modern public buildings or urban spaces imbued with power and also the potential for conflict."

Water control was central to the development of the Thai state and led to the evolution of central governance to manage reliable food surpluses, which "in turn allowed political development in religious and/or military guises", maintained Falvey (2000:74), taking a neo-Wittfogelian position. As Wittfogel himself noted, "[A] society which provided unique opportunities for the growth of the governmental machine left no room for the growth of a politically and economically independent dominant religion. The agro-managerial sovereign cemented his secular position by attaching to himself, in one form or another, to the symbols of supreme religious authority. In some instances his position is not conclusively theocratic, but this is more the exception than the rule. In the majority of all cases hydraulic regimes seem to have been either theocratic or quasitheocratic" (Wittfogel, 1957:92). As argued by Fong (2009) and others (e.g. Handley, 2006), the present monarchy has been skilled at manipulating primordial simulacra derived from the Siamese empire, Buddhism and resurrected royal ceremonies, many of which originated from earlier Brahmanical rites and have helped to strengthen the king's status as a modern day *dhamma-raajaa* and *deva-raajaa* amongst his subjects (see Chapter 10, Section 10.3). Perhaps the most vivid example was provided by the revival of the Royal Ploughing Ceremony (*Phuet Mongkhon*) under Sarit's regime in 1960 (see Footnote 67), enacted by the king whom it is believed could influence the weather patterns and crop abundance for the coming agricultural season, as a valuable new source of constructed magico-divinity for the throne (Jackson, 2010).

The symbolic value of royalty, religion and water control is not lost on the main modern hydraulic bureaucracies. It can hardly be coincidental, for instance, that every member of the present royal family has a large water storage dam named after

him or her, with three of them located in the Northeast⁹². A visit to any RID office in the provinces or capital will confirm that it places high stock on its royal credentials, with images of the king and queen occupying prominent positions on the walls of almost every room and outside space, with liberal use of the king's maxims and ideas incorporated into the physical surroundings⁹³, as well as official documents and reports. Meanwhile the RID's website is constructed to appear as a virtual shrine of homage to King Bhumibol Adulyadej⁹⁴, disseminating and reinforcing popular narratives about the relationship between the king as sacral and prophetic "Father of Water Resources Management" and the RID as the institutional priests and protectors of the hydraulic mission and official doctrine of irrigationalism.

5.5 Officially defined irrigation

As part of its pre-eminent role as official arbiter and mediator of irrigation discourse in Thailand, the RID provides the official definition of irrigation and which practices are allowed to pass for "*chonla-prathaan*" (see Box 5.1). The RID makes a simple gross distinction between "rainfed" and "irrigated" land and water management practice and status. To be considered "irrigated", the land must lie within the command area of one of the RID or another state agency's constructed schemes, either past or present. The RID system implies that land outside an official scheme is by default classified as "rainfed", regardless of its actual status. This, in effect, is a self-referential programme of perpetually accumulating total irrigated areas, creating a false impression that ever more "rainfed" land is being brought under irrigation, feeding a developmentalist utopian fantasy of continual progress and productivity (see Figure 1.1 in the Introduction and Table 5.5 below). Once officially classified as "irrigated", the land apparently never reverts to its former (and inferior or less-civilized) "rainfed" status, even if no actual irrigated agriculture takes place on the land and crops rely on rainfall for the main water source. Thus, from the perspective of official datasets, there would appear to be a gradual, ineluctable historical progression of

⁹² In Northeast Thailand, the three large dams are named after one of the princesses: Ubon Ratana Dam in Khon Kaen province (multipurpose); Sirindhorn Dam in Ubon Ratchatani Province (multipurpose); and Chulabhorn Dam in Chaiyaphum Province (hydropower).

⁹³ An example, was the siting of a large scale model of an idealized "Sufficiency Economy" village near the front entrance to the provincial office at the Nakhon Phanom RID and the display of plaques citing quotations taken from the king's speeches regarding water management principles.

⁹⁴ For example, visit the following RID webpage (accessed 28 April, 2012): <http://www.rid.go.th/eng/Irrigation%20Project.html>

land from “rainfed” to “irrigated”, a trend the hydrocracies seem determined to maintain and even accelerate through the promotion of irrigation mega-projects (Chapter 7).

Box 5.1 “Irrigation” definitions in Thailand

The Royal Irrigation Dept (RID) loosely defines irrigation on its website as follows: “*Irrigation means the supply of water for cultivation to meet crop water requirement. Irrigation work shall consist of two elements: it shall be the work carried out by any person to make use of water and such water shall be used for cultivation*”. Therefore, by its own definition, irrigation practiced by farmers independently of state projects should still be categorised as being “irrigated”, yet it fails to recognise their practices and methods in its documents, merely accounting for its own projects, no matter whether anyone is in fact utilising them or not, or whether any water is delivered in practice. However, it seems that in practical terms RID interprets “irrigation” according to the definition laid down by the State Irrigation Act (No. 4) B.E. 2518 (1975), “*where ‘Irrigation’ means any undertaking carried out by the Royal Irrigation Department to procure water or to retain, store, reserve, control, supply, drain or allocate water for agriculture, energy, public utilities or industry and includes the prevention of damage caused by water as well as navigation within the Irrigation area*”. From this definition, it is clear that it has no direct interest in irrigation or wider water management practiced outside its own purview and control. This more recent definition of irrigation contradicts older ones, such as that expressed in the People’s Irrigation Act B.E.2482 (1939), which states, “*‘Irrigation’ means all kinds of work carried out by any person to supply water from any waterway or any source of water, such as, rivers, streams, creeks, swamps, canals, marshes, for cultivation and includes those made for the purpose of protecting the cultivation from damage due to water.*” Thus, it is apparent that not only is the chief irrigation planning and implementing agency using a rather narrow, self-referential and confusing set of definitions of irrigation, these definitions are significantly at odds with internationally applied definitions of “irrigation”, with the implication that a variety of agricultural water management practices in Thailand are poorly understood and overlooked by the RID and other agencies (domestic and international) that rely on it for irrigational information.

(Source of definitions: http://www.rid.go.th/eng/main2_eg.htm, accessed 12 October 2011)

Year	1941	1950	1961	1975	1985	1995	2003	2007
Irrigable area (000 ha)	362.6	612.9	1,580	2,419	3,822	5,004	4,986	6,415
Irrigated land (% of total cropland)	n.d.	10	8	15	19	24	26	34

Sources: Wijeyewardene, 1973; Department of Water Resources, 2006; Falvey, 2000:150; FAO AQUASTAT 2010 website:

http://www.fao.org/nr/water/aquastat/data/factsheets/aquastat_fact_sheet_tha_en.pdf, Accessed 5 June 2012)

Table 5.5 Data showing officially irrigable areas and percentage of total agricultural land under irrigation in Thailand between 1941 and 2009.

Further, the RID irrigation classification scheme makes a simple functional distinction between water source (i.e. “gravity fed” and “pumped”) and the scale (i.e. small, medium and large) of system (see Table 5.6 below). RID’s scalar distinction simply categorizes according to the theoretical command area of each system and

certain other criteria, such as cost, length of construction and reservoir capacity. This classification system overlooks the wide diversity of *de facto* irrigation scales, practices and technologies employed by farmers in Thailand, which naturally are dependent on a wide range of local socio-ecological criteria and choices employed. As previously mentioned, within the officially classified “rainfed” areas, there is no attempt by the RID to establish actual agricultural water management (AWM) practices⁹⁵, which inevitably implies that where farmers are practicing a variety of irrigation methods drawing from their own resources (all of which would qualify as “irrigation” according to the People’s Irrigation Act definition provided in Box 5.1), they are not recognized as irrigators and so remain ineligible for RID water supply subsidies, enjoyed by their compatriots under an official *chonla-prathaan* project.

Description / Category	Small-scale system	Medium-scale system	Large-scale system
Feasibility study	Desk study	Full study	Full study
Budgetary approval	RID	NESDB	NESDB
EIA requirement	No	Yes	Yes
Construction cost	< 100 M baht	100-1,000 M baht	> 1,000 M baht
Construction period	1-2 years	2-5 years	>3 years
Reservoir capacity	< 20 Mm ³	5-100 Mm ³	>100 Mm ³
Irrigation area	0-1,000 rai	1,000-80,000 rai	>80,000 rai
O & M responsibility	TAO/PAO	Provincial RID	O & M central RID

Acronyms: NESDB = National Economic and Social Development Board; EIA = Environmental Impact Assessment; TAO = Tambon or Sub-district Administrative Organization; PAO = Provincial Administrative Organization; O & M = Operation and Maintenance

Table 5.6 RID categorization of irrigation projects in Thailand, based on a number of administrative, scalar and budgetary criteria

Hence, a two-tier classification system for land and farmers has developed in Northeast Thailand, which means a small minority of overall farmers located inside officially “irrigated” areas generally receive a relatively high level of state subsidy for their water supply, while the vast majority classified as “rainfed” farmers are excluded from such benefits. Whether the *chonla-prathaan* farmers do benefit in practice varies from project to project, with the larger projects receiving the highest relative subsidy. But given the attractive state subsidies for irrigation system construction and subsequent operation and maintenance (O & M) costs in addition (at least in the case of large and medium systems), and the promise of essentially free

⁹⁵ Molden (2007) argues that, “it is time to abandon the obsolete divide between irrigated and rainfed agriculture”, and instead use the more inclusive term “agricultural water management” to encompass a whole range of agricultural water management practices that go beyond this simple polarization.

water delivery with a royal cachet attached, then it is hardly surprising that many villagers outside the state sanctioned *chonla-prathan* systems aspire to be incorporated as a recipient of “royally gifted water”, given the discursive power of irrigationalism in Thai society.

Officially recognized “irrigated” areas once calculated by the RID, are subsequently uncritically adopted by other state agencies, international organizations and commentators. To illustrate one outcome of this tendency, I point to Table 5.2 in Mirumachi (2012:90), which shows projected areal data of irrigation areas from National Economic and Social Development Plans (i.e. normative targets), itself adapted from an RID official’s interpretation, and another table titled “The existing irrigation projects located in Mekong Basin” in a report by the Thai National Mekong Committee (2009:6), which shows a vast discrepancy (i.e. up to 450 %) exists between estimates of numbers of irrigation projects sources from data provided by the RID, the DWR and the MRC. One conclusion that can be drawn from these observations is that no one agency in Thailand appears to be able to accurately quantify: a/ how many irrigation projects exist; and b/ the areal extent of land actually irrigated, as opposed to theoretical irrigation command areas.

5.6 Irrigation development in practice – lost in translation

As a consequence of the RID’s monopoly of the definition and classification of irrigation in Thailand, understandable confusion exists amongst all actors about what is and is not allowed to be defined and understood as “irrigation” in practice. This became apparent during field interviews - when I mentioned the term “*chonla-prathan*” meant in the general sense of irrigation used in English language, it was frequently interpreted in a far narrower sense according to the RID official definition (Box 5.1). For example, when I interviewed the District Chief of Agriculture in Sri Songkhram District, he assured me there was absolutely no irrigation in the district⁹⁶, even though I knew in reality there was plenty of irrigation practiced in the District,

⁹⁶ The same terminological confusion arose during an interview with Mr Boonhong Chaibin, Chairman of Tha Bor Songkhram TAO, on 20 July, 2010.

covering several different technologies and spread over a large area⁹⁷. Had I not possessed prior knowledge of irrigation semantics and local practices, I might well have taken him at his word and written off the existence of irrigation in the district, as official data provided by the RID would confirm. When pressed on the issue and invited to clarify his response, he tried to explain that what he actually meant was that there were no official RID irrigation projects presently in the district, and he had interpreted my question in the formal and official sense of the word “*chonla-prathaan*”. He clarified that farmers’ own irrigation methods did not qualify as *chonla-prathaan* and thus did not count as “irrigation” according to the state definition:

“..... there is no water pumping for farmers under a *chonla-prathaan* system, because there are no canals yet. If there was a *chonla-prathaan* system, then you would see another system; there would be reservoirs, there would be canals for the farmers. But in the case of Sri Songkhram District, there is just pumping water from natural water sources up to the area of farmers’ paddies directly. There is not yet a main canal system or small distributor canals [*khlong sai gai*] as such.” (Source: Interview with Jeddy Khotamit, 19 July 2010)

The implication of this response and subsequent discussion was that farmers practicing a variety of agricultural water management methods relying on their own initiative and resources (or state-built small reservoirs), were considered outside the state-sanctioned irrigation definition of *chonla-prathaan*, and thus Sri Songkhram District was considered still to be fundamentally lacking this symbolic indicator of development and progress. Jeddy seemed to believe that it would automatically benefit the district’s farmers if they were furnished with supposedly free and unlimited water promised by the development of RID-funded *chonla-prathaan* projects, such as the long-planned Nam Songkhram Project (Chapter 8, Section 8.4). In effect, such outright denial of the existence of individual or communal farmer-based irrigation practice from official data and narratives of local irrigation⁹⁸, serves

⁹⁷ Data for the 2009-10 dry season, indicated that farmers had planted about 7,120 ha of *naa prang* alone, which would be impossible without the benefit of supplementary irrigation (see Chapter 8, Table 8.3).

⁹⁸ This observation was noted in an unpublished “irrigation scoping study” of the Lower Nam Songkhram Basin that identified eight categories of AWM, which found the most sustainable forms of irrigation were individual farmer practices where farmers bore the entire costs of water extraction themselves, although none of these were acknowledged by RID officials as constituting “irrigation” (Promphakping, Piansak and Pholsen, 2005).

to silence and exclude empirically-based knowledges and *de facto* practices which might provide viable alternatives to the dominant state mode of irrigation development. Such politics of knowledge issues reach to the heart of irrigationalism and the power of RID and other hydraulic bureaucracies to construct and manipulate irrigationalism as a dominant ideology in Thai society.

5.7 Contemporary political expressions of irrigationalism

Contemporary *irrigationalism* in Thailand can be conceived as enshrining a set of widely held beliefs and values that appear to have fundamentally influenced and driven the irrigation development paradigm over the past half century. Superficially, as a commonsensical and normative notion about how Thailand *ought to develop*, it appears to bridge class, ethnic and regional divisions, but on closer consideration embodies and legitimates the interests of elite groups, thus helping to maintain their dominance over subordinate groups and the problematic periphery of the kingdom.

Irrigationalism has proved to be a powerful state instrument for effectively subjugating and simultaneously tantalizing the mass rural populace with an utopian vision of a prosperous irrigated rural idyll awaits, most vividly expressed in the discourses and imagery of irrigation mega-projects (see Chapter 7 for an example), extended by hydrocracies and state policies traditionally, but in recent years has also been included in party political manifestos and slogans (see Figures 5.1 and 5.2 below for contemporary examples of the continuing prominence of irrigation development ideology in national politics⁹⁹). Under the rationale of creating an irrigational utopia, the dominant groups benefiting most from the ideology are content to use various means to manipulate popular perceptions, including the consistent propagation of political media that associate happiness and prosperity with irrigated agriculture, demonstrated by several parties in the July 2011 election campaign. One political party (Bhumjaithai Party) made extravagant promises of an irrigation project in every sub-district and the wealth that would follow to farmers from a national irrigation provision programme (Fig. 5.1), while another main

⁹⁹ Heywood (1992:13) argues that at an operative level, ideologies may take the form of broad political movements “engaged in popular mobilization and the struggle for power. Ideology in this guise may be expressed in sloganizing, political rhetoric, party manifestos and government policies.”

competing party (the Pheua Thai Party of Thaksin Shinawatra's political network) made the promise of constructing a transnational water grid if elected, that would banish drought and floods from the nation (Fig. 4.2). It seems the mass rural voters of contemporary Thailand have in a way substituted for the labour masses controlled under Wittfogel's ancient hydraulic societies, that while not being forced by corvee to dig canals, are still nevertheless being manipulated through more subtle means to enable demand for irrigation infrastructure. For the present, it seems Thai engineers will continue to imagine there is little they cannot do.



Fig. 5.1 (Left) Party poster used by the Bhumjaithai Party prior to the July 2011 election, claiming “Have water. Have money. Build waterways into the fields of farmers”



Fig. 5.2 (Right) Party poster used at the same elections by the winning Pheu Thai Party, claiming, “Goodbye! Floods and droughts. Build a water network nationwide. Build a wall of dams.”

5.8 Summary

The Thai form of irrigationalism, as defined here, may be seen to share certain conceptual parallels with other identified ideologies based on irrigation development, such as Adams' (1992) irrigationism in African nations and Hamilton-McKenzie's (2009) “Irrigationist Philosophy” in Australia, albeit in a distinctive geopolitical and cultural context. The unique traits include an elite fascination with promoting notions of “Thainess” that includes irrigation-based farming as an integral part of the historical imaginaire; the quasi-religious authority of a paternalistic king sitting at the apex of a strongly hierarchical society, combined with the royal gifting aspect of

water resources, that show parallels with the historical tank systems of Tamil Nadu (Mosse, 2003). In Thailand's case, irrigationalism may be interpreted as a dominant ideology of the central elite that is applied to the periphery or "others" as a means of state simplification, legibility and control. It is closely allied to the better recognised dominant ideologies of developmentalism, royalism and nationalism; and thus incorporates elements of willing consent and hegemony, as well as more sinister coercive aspects, in its application.

Despite the wide allure of following irrigation development pathways, a cornucopian application of irrigationalism has by and large failed to deliver on its promise of improved water resources management outcomes, it stubbornly persists as a dominant ideology through the first decade of the twenty first century in a country that was once proud to have joined the ranks of Newly Industrialised Countries (NICs) (Bello et al., 1998; Baker and Phongpaichit, 2005) demonstrating its allure, strength and resilience as an ideology. Wiener (1972:64) provides partial explanation for the resilient nature of irrigationalism when he states that the "test proofness" of ideological systems is a major obstacle to change, "since no observational or theoretical evidence is ever accepted as disproof of an ideological set, and whoever attempts to disprove such a set is branded as a revisionist, a deviationist, a paid agent of the opposite ideology, or an amateur". As such, it can be regarded as a particularly powerful ideological tool of the hydraulic society elite groups (incorporating state and non-state institutions), and in particular through the close association with and legitimation provided by the present king and reproduction via a range of state apparatuses of power (e.g. hydrocracies and militarized bureaucracies), highlighting complex power relations to be explored in later chapters.

Chapter 6 “*Isaan haeng laeng*” – social constructions of regional water scarcity, received wisdom and development narratives

“You see, for us Nakhon Phanom people, when it’s the rainy season it floods, but in the dry season all the water flows into the Mekong River and leaves us with drought; and cracked, arid land everywhere.”

(Source: Comments by H.E. Khun Suppachai Phosu, MP for Nakhon Phanom and Deputy Minister of Agriculture and Cooperatives. Interviewed 27 June, 2010)

6.1 Introduction

In this chapter, I intend to demonstrate how the popular perceptions of naturalized water scarcity in Northeast Thailand have been discursively constructed by certain actors in a way that serves to problematize the region. Through claims to historical legitimacy and scientific authority, elite groupings within Thai society have constructed or “manufactured” dominant and popular narratives concerning water resource scarcity¹⁰⁰, in a manner similar to that noted by Mehta (2001) in Gujarat, India. A major difference being, however, that the Northeast of Thailand enjoys three to seven times more annual rainfall than Gujarat¹⁰¹ and is in a semi-humid tropical zone, rather than semi-arid. The assumptions on which the narratives are based may superficially appear quite commonsensical and self-evidential, but on closer examination, such truth claims often obscure alternative and competing interpretations of the region’s socio-environmental conditions. As such, this chapter examines the historical origins of regional problem framings, the actors that have propagated them and how such framings have led to certain standardized, top-down,

¹⁰⁰ The chapter title refers to a ubiquitous Thai phrase associated with the Northeast – *Isaan haeng laeng* (translating as “arid Isaan”) - which I contend is an environmental orthodoxy, based on a mix of true and false representations of environmental belief and experience (Forsyth, 2003)

¹⁰¹ Mehta (2000) indicates that Kutch District, the location of her research, has annual average rainfall of 367 mm. The driest parts of Northeast Thailand average over 900 mm rainfall per annum, while the wettest districts in the Nam Songkhram basin experience over 2,800 mm per annum.

hydraulic engineering-oriented solutions. As with similar examples identified in contexts in Africa (Leach and Mearns, 1996), the received wisdom has generated programmatic development solutions, but has not necessarily addressed the underlying social problems of the region which remain obscured or unidentified, and moreover, has led to misguided and fundamentally flawed regional development policies being adopted. Where development failures occur (and in the case of irrigation development projects in Northeast Thailand, I would maintain that failure is the norm, rather than the exception), the development community has tended to blame the failures on such factors as recalcitrant or uneducated development subjects (e.g. an “ignorant farmers” narrative), poor implementation procedure by the agency concerned, unsuitable technology or poor policy formulation. Dove (1999) asks the pertinent question, “to what extent are ‘unintended’ development failures in fact ‘intended’ (in some structural sense)?” and therefore related to underlying power relations of that society. In keeping with post-structural political ecology approaches to deconstruction, it does not attempt to supplant one version of social truth with another (Blaikie, 1999).

The chapter begins by looking at the basis for a separate cultural and ethnic regional identity constructed for the Northeast, as a way of placing it in context of the wider Thai state. Using discourse analysis approaches to explore dominant and popular knowledge constructions of water scarcity, this chapter traces the archaeology of some dominant narratives back to the early twentieth century and links them to certain powerful actors, which I argue have been influential in determining the evolution of later regional development solutions. Additionally, it examines contemporary perceptions of Isaan’s water resources development issues amongst members of the general public, drawn from a fieldwork survey, which appear to show that there is a general congruence between the dominant ideological tenets of the centre and popular perceptions. Such story-line analysis allows a more historically and culturally situated understanding of different actors’ voices (Forsyth, 2003). The findings suggest that the dominant regional development narrative that makes strong associations between drought and poverty is largely a social construct, continuously reproduced at the national, regional and local scales (involving processes of naturalization and universalization) that benefits the interests of certain

dominant elites involved in promoting irrigation pathways. The chapter partially addresses the following research sub-questions:

SQ1: What are the probable discursive roots and origins of *irrigationalism* in Thai society?

SQ2: What are the main development narratives driving *irrigationalism*, framed by different actors, both historically and in the present context?

SQ5: To what extent are understandings of water scarcity socially constructed and whose interests are served by drought narratives?

6.2 Northeast Thailand as a peripheral region

I begin this chapter by providing some historical context and perspectives on the specific region of study, Northeast Thailand, to give a sense of its marginal status in relation to the core and what this has implied to its development trajectory. The Northeast, or Isaan¹⁰² as it is commonly referred to, lies almost entirely within the Mekong Basin, covering an area of about 160,000 km² and a population estimated at over 21 million, which was about one third of the nation in 2008. It has been described as a peripheral region, both geographically because of its physical separation from the rest of the kingdom by the Dong Phya Yen mountain range¹⁰³, but also structurally through supposed past isolation from national development processes, historically low economic investment, widespread poverty, scarcity of natural resources, political disenfranchisement of the people and exploitation by a parasitic and rapacious core centered on Bangkok (London, 1977; Parnwell, 2005). Culturally too, it is distinct from the centre, as Northeast people are predominantly of Lao ethnicity and speak variants of the Lao language (*pasaa Isaan*)¹⁰⁴ as their

¹⁰² The anglicized spelling of Isaan varies and may be variously written as Isan, Isarn, Esarn, Esan in different sources.

¹⁰³ These mountains form a dividing range along the western fringes of the Northeast and have in the past provided a geographical barrier to easy communications between the regions; although today they are dissected by numerous highways and the main railway link between Bangkok and Northeastern cities.

¹⁰⁴ McCargo and Hongladarom (2004) make it clear that there is no one “standard Isaan” language, but rather there are a variety of Isaan dialects spoken in different parts of the region on a Lao-Thai “dialect continuum”.

mother tongue (McCargo and Hongladarom, 2004), but is a region of considerable ethnic diversity (Yukio, 1999), where historically minorities have often been discriminated against or “othered” by the Central Thai majority and Bangkok-based elite (Winichakul, 1995, 2000a).

The gradual process of assimilation and homogenization of the culturally diverse region into a Bangkok-centric polity began during the nineteenth century. Although the Northeast was nominally ruled from Bangkok since 1827, the capital’s rule was quite patchy until the latter part of King Chulalongkorn’s absolutist regime began to lay the foundations for today’s heavily centralized administration system. In 1899, the Bangkok administration under the Interior Ministry changed the names of the administrative regions of the Northeast from *Huamuang Lao Phuan* and *Huamuang Lao Khao*, to *Monthon Udon* and *Monthon Isaan* respectively, thereby removing ethnic linkages to Lao from the official regional names, in a process of etymological cleansing, described by Fukui (1993) as “very symbolic”. Around the same period, central Thai became the only language permitted to be taught in state schools following centralization of provincial education (McCargo and Hongladarom, 2004). This was a period of rapid military, bureaucratic and political expansion of the central state to establish administrative dominion over the newly mapped territories of the kingdom (Winichakul, 1995).

A number of academics, including Keyes (1967), London (1977), McCargo and Hongladarom (2004), and more recently, Phattharathananunth (2006), have highlighted the strong sense of regionalism found in Isaan, implicit in the regional name. Keyes’ (1967) central thesis postulated that the region was politically ignored and economically under-developed relative to the rest of the nation, and that a sense of ethnic identification, regional awareness and political fractiousness resulted from repressive policies imposed on the population by Central Thai elites sent to administer the region. Throughout the twentieth century, there were sustained periods of resistance by Northerners against control and domination from the core, including occasional armed rebellions that were invariably brutally suppressed by the state forces, such as the Phu Mi Bun Rebellion of 1901-02; the Nong Makkeo Rebellion of 1924; the *maw lam Noi*-Chada Rebellion of 1936; the Sila Wongsin Rebellion of 1959, and other more localized uprisings (see Keyes, 1967; Phongphit and Hewison, 2001; Phattharathananunth, 2006). Phongphit and Hewison (2001:78)

argue that the defeats of these and other acts of resistance by Isaan villagers to the Thai state and exploitative economic relations, encouraged villagers to “project a passive face in their politics.” However, regional rebellion and dissent by Northeasterners continued in pockets throughout the twentieth century up to the early 1980s, when many disaffected villagers took up arms against the government¹⁰⁵, with the region seen as a key strategic and ideological “battleground” in the US-supported fight against communism given its proximity to Indochina, portrayed as a potential “domino” on the verge of toppling (Molle et al., 2009a). The ruling powers in Bangkok and Washington framed the Northeast resistance in terms of addressing a “Northeastern problem”, that securitized the region as a threat to the continued existence of the government, the monarchy and indeed, Thailand itself (Keyes, 1967). This discourse justified the channeling of vast resources into ensuring the cultural, political and ideological integration of the Northeast into the folds of a Bangkok-centric parasitic core – in a relationship that was both exploitative and neglectful (London, 1977). Hence, Isaan regional identity has always been subservient to more dominant national constructions of “Thai-ness” (as articulated in Chapter 5, Section 5.3), an ideology consistently cultivated by the political elite to the extent that it has become a “system of truth”, according to Sattayanurak (2005), drawing on a Foucauldian term.

Both McCargo and Hongladarom (2004) and Myers (2005) agree that the modern Isaan identity is a problematic political construct that reflects subtle ambiguities of self-expression by the Northeast people themselves. The first two authors maintain that Northeasterners are engaged in an internal negotiation concerning their split Thai-Lao identities and external negotiations about, “relationships fraught with cultural, social and political ramifications” (McCargo and Hongladarom, 2004). A key element of this process of identity morph, I would maintain, has been a gradual assimilation of central Thai notions of a supposed natural superiority of irrigated rice cultivation over pre-existing land-waterscape management regimes, which in turn have gradually been rejected in favour of centrally constructed notions of agricultural development and modernity, including the ideology of irrigationalism. This in turn has weakened grassroots movements and civil society attempts to resist

¹⁰⁵ Phatharathananunth (2006) notes that when the communist insurgency reached its peak in 1978, there were 14,000 armed insurgents nationwide, of which roughly half were based in the Northeast, and all but one of the region’s provinces had a guerilla base.

the Bangkok-centric projects of territorialization and ideological domination, through processes of social reproduction and co-evolution. However, in frontier development arenas such as the lower Nam Songkhram Basin where isolation from the core has somewhat helped ameliorate natural resources degradation until relatively recently, there has been proportionately more resistance to top-down state development programmes (see Blake, 2006; Blake et al., 2009) and the process of central domination has been marginally slower than elsewhere in the Northeast.

6.3 Isaan development narratives: a quest for *siwilai*?

As part of mainstream development discourse, there are a number of popular development narratives that constitute “received wisdom” or “environmental orthodoxies” for framing the region’s problems. Most prominent amongst these, I argue, is a regional water scarcity narrative that has permeated modern Isaan development discourse and problem framings for at least a century. I maintain that this narrative can be traced back to regional descriptions from the latter part of the nineteenth century and early years of the twentieth century, when Siam was still an absolute monarchy and the ruling elite in Bangkok relied partly on Western advisors to feed back notions of modernity and progress for adaptation as potential development policies, strategies and projects. The government hired European technical advisors and administrators in certain key departments and ministries, particularly in the fields of education, transportation, communication and agriculture, including irrigation (e.g. Homan van der Heide to set up the first Irrigation Department (Brummelhuis, 2005)). Sons of the Siamese nobility were sent to the West to receive an education, as part of a quest to instill notions of modernity (*thaan samai*), progress (*jaroen*) and civilization (*siwilai*) in the next generation of elite state-makers and rulers (Winichakul, 1995, 2000b). Winichakul (2000b:546) stresses the quest for *siwilai* was part of an elite desire “to avoid the disgrace of inferiority” for being perceived as less civilized by other nations, which included spatial strategies to make the “others within”, the less civilized rural folk (*chao baannok*) such as the Lao people of Isaan, become more like the civilized people of the city (*muang*).

As alluded to in the previous section, in the eyes of elite, Isaan people were made to feel that their local culture and livelihood patterns were considered inferior to those of the dominant Central Thai majority (Keyes, 1967). Irrigation practices and techniques (such as the much hyped *muang fai* system) of the North and Central Plains of Thailand, were notably absent in the Northeast, adding to an aura of agricultural backwardness and need for development from the centre. As well as defining the qualities of “Thai-ness” as the new national identity, the Bangkok elite sought to create discursive and symbolic enemies as an important function of the nation state in maintaining dominance and control over the periphery. Winichakul (1995:168) stated, “[T]o confirm Thai-ness, it does not matter if the enemy is relatively abstract or ill-defined. The enemy is always present”. I argue that drought in Isaan has become one such loosely-defined, abstract enemy that has been socially constructed as an ever-present threat to national security and the well-being of the greater Thai nation (see Section 5.4 below). The propensity for dominant discourses surrounding particular “water crises” to empower the actors which construct and perpetuate them has been discussed elsewhere, amongst others, by Trottier (2008), Mehta (2001), and Williams (1997). Interestingly, Michael Dove (1999) has suggested that the physical characteristics of dry areas has contributed to their political marginality, which in turn has led them to become epistemologically marginal as well.

6.4 The demonization of drought as a national enemy

Manufacturing popular perceptions of water scarcity by the state and other institutions amongst the general public is not solely restricted to “developing” nations, but can also be detected in “developed” countries, including Australia (West and Smith, 1996); the United States (Reisner, 1986); and the United Kingdom (Haughton, 1998; Bakker, 1999a). The case of Australia is particularly illustrative of how an ill-defined concept of “drought” can be demonized by certain sectors of society. Taking a Durkheimian approach to conceptualizing the role of drought, West and Smith (1996:97-100) have proposed four reasons why drought may be a useful resource for constructing moral solidarities and boundaries, namely:

1. **The “phantom objectivity” of drought** – drought tends to be understood by most actors as something objective rather than socially constructed, lying beyond the reach of party politics of ideological manipulation, something which “really happens”. Thus, drought “is potent as an enemy precisely because it is misrecognised as a *natural fact* rather than correctly perceived as a *socially constructed fact*.”
2. **Drought is mute** – national discourses frequently identify moral enemies that threaten the “national way of life”. However, human “symbolic enemies”, such as those in marginalized groups like immigrants, racial minorities or even, football hooligans, are capable of organizing coherent counter-narratives which may upset the totalizing or solidaristic nature of the mainstream discourse. By contrast, natural phenomena such as drought, “are more functional in that they provide for a discursive field that is monological, less contested and less ambiguous, but thereby inclined towards resolution and narrative closure.”
3. **There is always a drought somewhere** – because of the size of the continent of Australia and the statistical inevitability that there will generally be one or more areas experiencing below average rainfall at any given time, droughts tend to “constitute an immediately available resource through which threats to moral and national communities can be constructed” by national leaders and powerful groups in society.
4. **Drought is a key symbol in white Australian mythology** – through multiple media channels, “the mythological role of the harsh and drought-afflicted landscape has been to temper the national character through struggle”. The authors suggest that drought has a high level of “retrievability” (Schudson, 1989) and is a symbolic resource that resonates with the core beliefs and foundational narratives of the Australian people. They believe it is remarkable that the symbolic power of drought endures, even as it becomes a more economically diverse, urbanised and multicultural society.

The authors base their claims on an extensive, qualitative study of media, political and popular discourses of drought in Australian culture over the span of a century. They found that even with a declining relative importance of the agricultural sector in the Australian economy, there was a steady media interest in drought, which had been relatively autonomous from both meteorological and economic determination. West and Smith (1996) argued that drought remained a potent symbol in Australian society for invoking moral discipline and social unity, seen as a natural “adversary” for the entire nation to fight, despite Australia’s erstwhile transformation into a

highly urbanised and post-industrial society. Development narratives that demonize and naturalize an ill-defined notion of “drought” while linking it as a cause of poverty are an integral theme in the modern history of Northeast Thailand and serve similar purposes for the nation’s elite, I argue. In the following section, a selective narrative history from a variety of sources is traced from the turn of the twentieth century down to the present day, illustrating a certain consistency and immutability in the drought discourse. I do not attempt to distinguish “fact” from “fiction” or determine a realist, quantitative account for drought measurement (for example by examining rainfall or hydrological records). Nor is it my purpose to attempt to create an alternative or competing narrative, but rather just provide a partial record noting the development of a dominant narrative and identify some of the key associated actors.

6.5 Early twentieth century regional narratives

6.5.1 A “poor, dry and jungly region”

In the absence of a tradition of systematic record-keeping of the socio-economic condition of the emerging nation-state, the late nineteenth and early twentieth century Siamese court in Bangkok must have been partially reliant on the written reports of various Westerners in its employment for a parallel conceptualization of certain aspects of the more remote tracts of the kingdom to Thai cosmologies. Unlike the Central Plains and parts of the lower North which were relatively well served by navigable rivers, travel to and within the Northeast involved a slow and arduous overland journey between Bangkok and the main provincial administrative centres, until the advent of a limited railway network made access slightly easier¹⁰⁶. All the rivers of the Khorat Basin essentially drained eastwards towards the Mekong River and most were only navigable during the wet season and even then were often located some distance away from the main centres of population. According to the

¹⁰⁶ The railway from Bangkok reached Nakhon Ratchasima (also known as Khorat) in 1900, but did not reach Ubon Ratchatani until 1930 and another line to Khon Kaen until 1933 (Naewchampa, 1999). This line was later extended to Udon Thani and Nong Khai in the late 1930s to link up with the French Indochina capital of Laos at Vientiane.

early twentieth century visitor Kornerup (1999), it would have taken more than a month to travel between Ubon Ratchatani and Khorat by bullock cart in the 1920s, a distance of about 320 km. Travelers to the region often took copious observational notes concerning the peoples, cultures, economy, environment and geography, which were later shared with related government departments. Take for instance, these brief excerpts from the diary report written in 1901 by a French legal advisor to King Chulalongkorn's government named Emile Jottrand, and reproduced in Yukio (1999:187-188):

“Few paddy fields around the region. Almost everywhere the unproductive jungle reigns supreme, the region is very poor.....There is hardly any province poorer than Korat The roads are fissured, the shallows where there is usually water permanently are dry and arid. It's a real calamity.....the rice fields are rather uncommon..... Consequently, the countryside is wild and deserted.”

Similarly, Cecil Carter¹⁰⁷ editing a book a few years later for the Ministry of Agriculture's display at an Exposition in St Louis in the United States, made the following observations during his visit to the northeastern Siamese territories Carter (1904:53-54):

“The Korat Plateau and the Talesap plain are poor regions. In the rainy season the country is largely a swamp; a great part of the higher lands have a barren, laterite, sandy or stony soil (in the Korat plateau) or contain too much salt to be cultivable, so that in general only the belts of deposits along the rivers are fit for cultivation. Moreover, these regions only are fit for settlement, because in the dry season the country is nearly waterless, as only a few of the rivers contain a glimpse of dirty water that gathers in pools in the deepest places, whilst the ground-water, if obtainable, is generally too salt [sic] to be drinkable.....It is certainly no surprising fact that under such unfavourable circumstances the inhabitants are poor and backward compared with the Siamese of Lower Siam, and that the sanitary conditions of the people are worse than anywhere else in Siam. Enteric disease (dysentery and cholera), fever, and small pox are very common in these regions.”

¹⁰⁷ Carter worked for the Ministry of Education and was appointed Secretary-General of the Royal Commission that was tasked with the job of writing a book on Siam for the pavilion of the Ministry of Agriculture presented at the Louisiana Purchase Exposition in 1904.

It can be deduced from these descriptions that both Jottrand and Carter visited the Northeast during the dry season and were essentially judging it against the hydrological and socio-economic conditions found around Bangkok and the lower Chao Phraya delta during the same season as a yardstick for relative water scarcity, poverty, and indeed, notions of progress and modernity. It is highly probable that the five to six month dry season is when the majority of visitors, both domestic and foreign, would have traveled to Isaan prior to the arrival of the railway network and improved road communications post World War Two. Travel in the wet season would have been far more problematic, hazardous in terms of disease risk and prone to delay, using bullock carts or riding horses along unmade roads and tracks with few bridges across waterways. The dry season (i.e. November or December to April), although frequently hot and dusty during the latter few months, was the most practical, accessible, healthy and certainly more pleasant time of year for visiting dignitaries, state officials, advisors, surveyors, and proto-tourists to leave the relative comforts of Bangkok to visit the “arid, poor and backward” Northeastern provinces.

Thus, it seems fair to surmise that the popular received wisdom surrounding Isaan formed by the governing elite in Bangkok and early foreign visitors was influenced by a strong seasonal bias (see Chambers, 1993), by choosing a time of year when inevitably surface water resources were scarce, there would have been little or no agricultural activity occurring (people were likely engaged in livelihood activities largely invisible from the roads and villages, such as harvesting forest products and wetlands foraging, which often involved migrations to distant locations), leading to unfounded conclusions about the perceived poverty and “backwardness” of the people being linked to its apparent aridity¹⁰⁸ and that the extensive forests observed¹⁰⁹ were little more than “unproductive jungle”. It is from such seasonally-skewed narratives of the Northeast, I contend, that the later dominant discourse emerged and adopted by subsequent generations of external agents, influencing the mindsets of Bangkok-based bureaucrats, foreign aid donors, development consultants and the popular media. These knowledge brokers were content to reproduce

¹⁰⁸ A further complicating factor is that the landscape appears more arid than its rainfall and climatic parameters might suggest, due to its underlying sandy geology, native vegetation and surface hydrological features, maintains Toshikazu (1999).

¹⁰⁹ Few accurate historical forest cover data appears to exist from pre-Second World War for the Northeast, but Vitayakon et al (2004) claims it was 90 % in the 1930s; but by 1961 there was reportedly just 53 % forest cover, which had been reduced to 25 % by 1998 (Azimi et al, 2000).

commonsensical narratives of chronic natural resources scarcity, perennial aridity, dire poverty, backwardness, etc. that remain prevalent in regional accounts a century later.

6.5.2 Swamps, floods and “nomadic” people

Those exogenous visitors that did venture to the region outside of the dry season would have witnessed the obverse of the Northeast’s natural meteorological and hydrological pattern, namely prevalent seasonal flooding, which often persisted on the broad and slow draining floodplains for several months. While tending to make most crop-based agriculture a risky proposition in these locations, this was compensated for by extensive and productive wetlands environments (the “interminable swamps” in Carter’s (1904) view), a regional characteristic frequently overlooked by dry season external observers. However, observers often noticed the mobility of the people and a tendency to migrate internally according to the season to take advantage of variable abundance in natural resources and livelihood opportunities. Later on, this propensity to “nomadism” of Isaan people has invariably been interpreted by state elites as an aberration to the natural order of things.

“This part of Siam is often so hot and water so scarce that people leave it and go eastward. Turn nomad. But only for a time; then they come back again. Sometimes, too, it rains so overwhelmingly here that the country is inundated. In the dry season the rivers are narrow; in the rainy season they are unable to drain these gigantic stretches, as there is only a slight slope. This is the most thinly populated part of Siam, yet it is a country that could be utilized if canals were dug and dams built ” (Kornerup, 1999:125)

In the 1920s written account above we start to see not only the region problematized seasonally along hydrological lines, but also the kernel of an idea towards future state hydraulic infrastructure interventions, both as a way to populate the region and sedentize the wandering people (perhaps so they could be made more visible, enumerated and taxed?). The author of this narrative was a wealthy Danish tourist on his first visit to Siam who was presented to upcountry officials as a guest of HRH

Prince Nagara Svarga¹¹⁰ and whose impressions of the Northeast were based on little more than a few days stay in each of five provincial, garrison towns. He travelled primarily by light aircraft between these administrative centres during March, when dry season temperatures were reaching their maximum and surface water would be at its minimum. Despite such a fleeting bird's eye encounter, he not only claimed to understand the region's problems, but further, felt qualified enough to offer solutions to the prince. A similar pattern of superficial problem identification and solution prescription seems to have been the norm for subsequent foreign development "experts" who flew in for temporary periods to provide technical and managerial advice about regional development to state elites for much of the rest of the twentieth century.

Between 1930 and 1931, as the end of the era of absolute monarchy was nearing and radical change was sweeping through Southeast Asia on the tail of the Great Depression, a Harvard University economist conducted what was described as the first nationwide survey of the Siamese rural economy (Zimmerman, 1999). Zimmerman visited each region of Thailand in the company of a team of state officials to collect data on behalf of the Ministry of Commerce and Communications, in order to provide a snapshot of the socio-economic state of the country. From the book's preface, one learns that he could not have conducted this survey without a "Royal Letter of direction to the local officials", issued by "His Royal Highness Paribatra, the Prince of Nagor Svarga"¹¹¹, with further acknowledgement for facilitation assistance given to several other princes and nobility in senior positions of government (Zimmerman, 1999:xv). As well as documenting contemporary socio-economic practices, Zimmerman considered it his duty to offer the Siamese government advice on future agricultural development, even in fields of specialist knowledge he almost certainly would have had scant or partial understanding of, including water resources management in socio-ecologically complex tropical river basins.

Under a section headed "Irrigation and Drainage" of the Northeast, Zimmerman (1999:151) stated:

¹¹⁰ Kornerup (1999:114) describes this member of the royal family as a "brother to the King of Siam, field-marshal and chief of the general staff"

¹¹¹ This is almost certainly the same member of the monarchy that previously hosted Kornerup, but with a slightly different transliteration of his name.

“Water is plentiful in the rainy season, but in the dry season there is no water except in the swamps and some rivers such as the Nam Mool, Nam Chi and Nam Songkram. Their tributaries do not begin in the mountains as do those of the rivers in the northern section, so there is little supply in the dry season. One way to remedy this shortage is to deepen the old swamps and make them reservoirs. All small streams should have sluices at the places where they join the larger ones. If sluices are built, more crops and animals can be raised in this section.”

Zimmerman similarly perceived that the Northeast’s greatest problems were under-population, poor health of the population and poorly developed water resources infrastructure, “particularly for drinking and bathing” (Zimmerman, 1999:295). Significantly, he does not specifically mention agricultural drought and his greatest concerns were for the primitive state of domestic water supplies, principally earth wells, which he believed were a major contributor to the health problems of the people and high mortality rates. His data suggested that the average yields of rice in Northeast Thailand were higher on average¹¹² than those in Central Thailand, even though the latter was considered Thailand’s “rice bowl” for domestic and export rice. In Zimmerman’s account, it was recommended that along the west bank of the Mekong River where tributary rivers entered the main river, the government should consider building “small flood gates” at the village level to control the level of water held in back-swamps following the rainy season. These were to be used by villagers for fishing, as a domestic water source, for watering livestock and “as dry season rice fields for the poor of the village”. He advised against blocking the major channels entering the Mekong, on the grounds it would be both expensive and go beyond the ability of individual villages to maintain. Significantly, Zimmerman’s assessment of the water resources “problem” for provinces bordering the Mekong River, such as Nakhon Phanom and Nong Khai, and the practical guidance he offered for engineering solutions to be undertaken by the state, seems to have influenced Thailand’s fundamental small and medium scale water resources development strategy for

¹¹² The 1930 economic survey in Northeast Thailand found that the rice yields for wet season rice varied between “14 to 32 *tangs* of 20 litre per rai” (Zimmerman, 1999:154). Assuming one *tang* weighed 12 kg, this would equate to a range of 168 to 384 kg/rai. The present-day average yield for Northeast Thailand wet season main rice crop was recorded as 318 kg/rai (Agriculture Information Centre data, cited in Turrall, 2008) for comparison, indicating regional rice yields have not significantly risen in over 80 years, even while irrigation investment and coverage has risen continuously over the same period.

the Northeast over the past four decades. However, eventually the hydrocratic planners could not resist the temptation to block the main Mekong tributaries as well, leaving only the Nam Songkhram as the last river to remain unblocked, although even this may not be the case for much longer (see Section 8.4 in Chapter 8).

6.6 Late twentieth century regional development narratives

Despite vast socio-economic changes and massive environmental transformations within Thailand during the twentieth century, the Northeast's dominant development discourse around water resources seems to have remained essentially static over the past century. The dominant state narrative has consistently characterized Isaan as a chronically poor, underdeveloped and backwards region that is perennially water scarce as a result of low and intermittent rainfall patterns that lead to worse droughts than other regions. Perversely the droughts are interspersed with occasional wet season floods, which are usually portrayed as being destructive to crops and property (see Lebel and Sinh, 2007). It is a region painted in the popular imagination as being "hostage" to a problematic hydrology (cf. Grey and Sadoff, 2007), that hinders its agricultural potential and general economic development. Moreover, water scarcity and poverty linkages have come to define the region for many, so ubiquitous are the narratives that connect them as a regional development trope. For instance the following regional descriptions, drawn from a range of sources over the past four decades, provide a representative indication of the ways in which the Northeast is rhetorically constructed in general sources, some showing more hubris than the early twentieth century descriptions:

"Geographically, the Northeast is a dry flat plateau, with sandy infertile soil, still largely under forest or scrub, and with insufficient water for effective agriculture or even for domestic needs. In consequence, the region is poor and its villages are largely isolated from the more prosperous central region of Thailand, and even - for lack of roads - from one another." (Girling, 1968)

“Because of its unfavourable climate conditions and depleted environmental conditions, the Northeast has become the poorest and most backward region of Thailand over time.” (Hirunruk, 1999)

“Overall the impression is of dryness, quite unlike the general image of Asia as hot and humid. The impression is of the African savanna, where lions rest in the shade of sparse trees.” (Fukui, 1993:19)

“The first thing that strikes visitors to Thailand's far Northeast -- a vast plain of stunted trees, spindly tussocks and grazing water buffalo -- is its dryness. It seems impossible that a landscape whose main features are salt pans, brackish ponds and devastated forests could support any form of animal or vegetable life, let alone human communities.” (Mansfield, 2000)

Increasingly in the last few years, a slightly re-adjusted development orthodoxy based on climate change discourse has emerged, that emphasizes scenarios of worsening floods and droughts in the region, further underlining a sense of crisis and urgency surrounding the Northeast's water situation, which in turn adds endorsement to the present hydraulic mission type approaches to mitigate perceived impacts. For example, at an August 2010 conference on climate change adaptation in Khon Kaen¹¹³, several of the papers presented stated that droughts and floods were causing worsening damage to rural communities and farmland in the Northeast, without providing any empirical evidence to support this claim. Climate change is widely accepted uncritically in Thailand as a real phenomenon already negatively impacting the nation, providing an *a priori* cause of perceived increases in flood and drought natural disasters¹¹⁴, at the expense of other more nuanced accounts of causality. Other bio-physical problems stressed in the popular regional discourse include a problematic topography for water storage infrastructure, an unfavourable or harsh climate; forest degradation and loss; unproductive soils related to acidity, salinity and low inherent levels of nutrients; sandy soils that have poor moisture retention capacity and are easily erodible. These combined natural resources deficiencies and human-induced environmental degradation (especially deforestation) are frequently linked as causal factors for widespread and endemic poverty. The region's

¹¹³ I attended this International Conference Workshop on “Livelihood and Health Impacts of the Climate Change: Community Adaptation Strategies” on 24-25 August 2010, sponsored by a number of international development and climate research institutions.

¹¹⁴ In the Questionnaire Survey conducted, it was found that of 144 respondents who thought drought was worsening in Thailand (Question 7), 39.6 % of respondents perceived this was due to “climate change” or “global warming”, which ranked as the second most common answer.

economical prospects are commonly perceived as being handicapped by the bio-physical disadvantages mentioned above, combined with less visible surface water than other regions, a low water storage capacity, under-developed irrigation systems and general isolation from the rest of Thailand. At its most extreme, drought is seen as an issue damaging national economic and food security, supposedly impeding the entire country's development, as illustrated by the following crisis narrative in an academic paper that failed to provide any evidence to support the claim:

“In Northeast Thailand, drought has the most profound effect on the way of living and regional economy. It is also a major menace to regional food supplies. By its severity and duration these events can be disastrous not only locally but for the whole economic structure.”

(Source: Mongkolsawat et al., 2001)

6.6.1 Popular narratives of water scarcity and poverty

In mainstream developmental discourse, the Northeast is invariably portrayed as a region occupied by small-holder farmers, struggling to eke out a living on poor, sandy and infertile soils forever plagued by recurrent droughts and occasional floods. However, narratives linking water scarcity and poverty in the Northeast are not solely restricted to official reports or general media articles alone, but also may be found in a range of mass culture, art, music and literature sources that further popularize and entrench the dominant narrative. The hugely popular Central Thai rock band Carabao, for instance, has often sung about the interconnections between the fickle climate, drought, rural poverty, urban migration and the need for all people in the nation to unite as Thais to overcome natural adversity. In a hit song titled “*Big Sieow*”¹¹⁵, the opening lyrics proclaim:

*“Isaan has been drought stricken for so many years,
Brothers and sisters, this is no lie.
(This is the whole truth)
That day I saw it with my own eyes,
That’s why I have to sing it to anyone who’ll listen
Soil like this.....oh-ho.....it’s cracked and dried*

¹¹⁵ “*Sieow*” is a colloquial Lao Isaan term for close friends, who are bonded for life through friendship.

*Some of it is red dust, like laterite.
Alack-alas! Why is it like this?"*

Tellingly, the band sang this song at a nationally broadcast fund-raising concert for Isaan drought-relief hosted by the Royal Thai Army in its own Bangkok stadium, entitled “Kindness Flows to the Green Northeast”. Attended by tens of thousands of fans, the concert in December 1987, was held just nine months after the official launching of the so-called “Green Isaan Project” (*khong-gan Isaan khieow*), a region-wide scheme inspired by the king and managed by the military to permanently rid the region of drought through the planting of fast-growing commercial tree plantations, promotion of agro-industry and construction of water resources infrastructure at multiple scales, including trans-basin diversion (see Chapter 7 for detailed discussion of this project). Given the underlying objectives of the concert and the Green Isaan Project, the words of this (and other songs in the same genre) cannot simply be interpreted in a politically neutral way, but suggest an ideological intent.

In popular literature, a widely-read example published in both Thai and English languages that pivots on a descriptive story of chronic climate and natural resources-induced poverty in the region is the novel, “Child of the Northeast” (*Luk Isaan*) (Boontawee, 1987), based on the life of a young boy growing up in rural Isaan during the 1930s and the hardships his family faced. The American translator reinforced a stereotypical view of the region, designed to induce equal feelings of pity and admiration in the reader for the powerless subject in his constant struggle against the vicissitudes of drought (the mute enemy), but overlook other possible sources of his poverty:

“In Bangkok, the very word “Isan” is almost a metaphor for poverty. For centuries Isan has been baking under a merciless sun, growing steadily drier and poorer – with just enough rain, just enough good years along the way, to give its people an unshakeable faith in the power of prayer, hard work and virtue to extract blessings – or, if not blessings, then pity – from the fickle spirits that control sky, earth, water, life, and death.”

Source: Susan Fulop Kepner in Preface to English translation (Boontawee, 1987:8)

It is remarkable that while the book's narrative identifies a distinctly malevolent climate and seasonal dearth of natural resources as the underlying key factor accounting for regional poverty (i.e. naturalization), the author avoids consideration of a wider historical and socio-political context pertaining at the time, such as an underlying structural inequality in Thai society to causally explain the protagonist's poverty. In 1982, the book was adapted for film and reached a wider audience, using a promotional poster that helped further entrench the timeless image of an Isaan peasant's livelihood (see Fig. 6.1 below), so beloved of the Thai elite and detectable in more recent narratives that construct romanticized images of the Thai countryside for exogenous and urban consumers, ignoring processes of deagrarianization (Rigg and Nattapoolwat, 2001; Rigg and Ritchie, 2002).

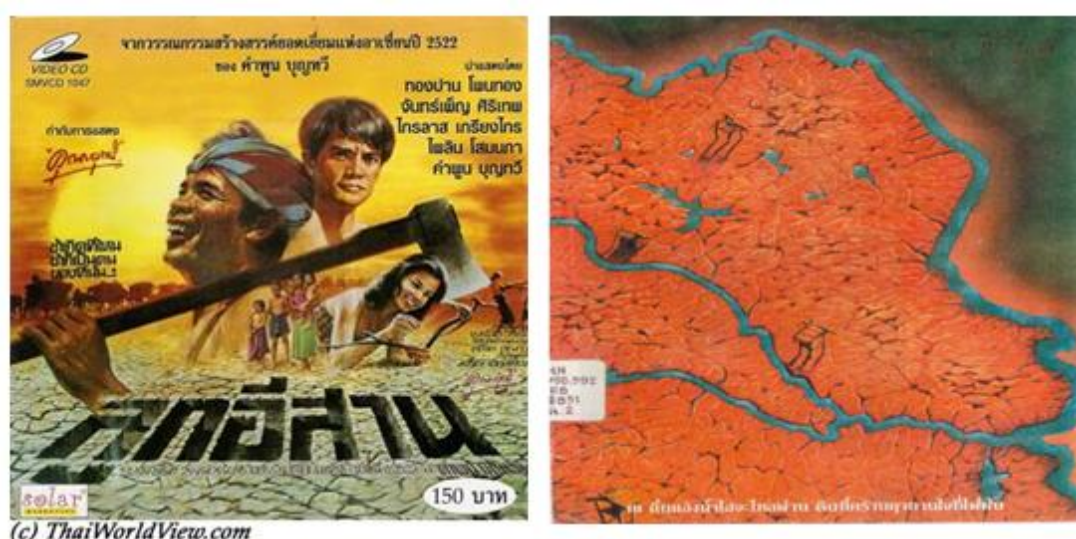


Fig. 6.1 (left) A VCD cover for the popular film and book of the same name, titled “Luk Isaan” (Child of Isaan)

Fig. 6.2 (right) A government-produced brochure cover for the (c. 1991) Khong-Chi-Mun Project showing a graphic representation of Isaan's main “problem”. The brochure used similarly emotive language to justify the project and promote the interests of its main political promoters in the Department of Energy Development and Promotion.

6.6.2 Drought – the “rotten root of other problems”

As the key meta-discourses of irrigationalism (especially the “poor and arid” narrative) for the Northeast have remained essentially static, so there has been a perceptible widening adoption of the rhetoric of justification (Molle et al., 2009a),

from a rather narrow bureaucratic, royal and military elite and strategic allies (domestic and foreign) of the pre-1980s to include regional and national politicians and a networks of allies, further enhancing the strength of the Isaan drought discourse, as in a sense this has “democratized” it, through their claim to electoral legitimacy. A particularly vivid case of this shift in source of rhetoric source (but also analyzed in the Green Isaan Project narratives of Chapter 7), was seen in the promotion of the Khong-Chi-Mun (KCM) Project by a powerful group of Northeast politicians and a handful of government ministers in the 1990s. One of the key actors within the political clique promoting the KCM Project was an MP for Udon Thani, Prachuab Chaiyasarn¹¹⁶, a wealthy businessman whose constituency was located at a major construction focal point of the KCM Project. As the Minister for Science, Technology and Energy responsible for the Department of Energy Promotion and Development (DEDP) in the General Chatchai Choonavan government (1988-91), Prachuab fervently promoted the project on behalf of DEDP during a period when it had not yet been approved by the budget committee via a glossy brochure, seemingly aimed at a broad audience, that used a variety of rhetorical techniques including catastrophic drought themed poetry, prose and artwork (see Fig. 6.2) to repeatedly stress the underlying causality of various socio-economic problems in the Northeast stemmed from drought:

"Drought is the rotten root of other problems that occur in Isaan. Whether it is the problem of poverty or the problem of labour migration; because if Isaan lacks water, cultivation will not bear fruit, agricultural production will be depressed, farmers' incomes will also be depressed, and in the end, Isaan people will have to leave their homes for Bangkok"

Quote attributed to Prachuab Chaiyasarn, Minister of Science, Technology and Energy. Source: (Ministry of Science Technology and Energy, No date)

Such essentialist problem framings by politicians show a strong convergence with the bureaucratic, techno-centric and populist perceptions, pointing to the depth and resilience of the dominant development narrative. They also illustrate the tendency

¹¹⁶ Prachuab, son of a *gamnan* in Kumpawapi District, Udon Thani, made his fortune from building a successful labour export business, sending workers from the upper Northeast to Middle Eastern countries, especially Saudi Arabia, during the 1970s and 80s, following the withdrawal of US troops and funding from bases in the Northeast.

for Isaan drought to be constructed as a silent, symbolic, non-human enemy of the nation, that forms an indispensable part of the regional development orthodoxy and nation-building ideologies (cf. West and Smith, 1996). Through such stigmatization of Isaan as a “poor and dry” land (never a wetland!) and other perceived deficiencies of the natural resources and people, has allowed national (and formerly international) agencies to introduce prescriptive hydraulic development solutions, which are introduced below (Section 6.8) and are discussed further in Chapter 8.

I now proceed to consider whether such environmental myths and development orthodoxies are commonly held perceptions society-wide or principally restricted to the realms of elite actor worldviews.

6.7 Local perceptions of water scarcity and regional development – strong resonance with dominant narratives

Thus far, I have presented the dominant problem framings of Northeast water resources development drawn from a variety of sources, including news media, music lyrics, art, popular literature, official reports and academic papers, showing a remarkably consistent storyline. But these reveal little about the perspectives of the subjects of development, or ordinary Thai people, whether living in the region or on the outside looking in. How do they perceive the region, frame its problems and view the solutions, both generally and specifically in terms of water resources issues? And do their perceptions match those expressed in the dominant ideology or development orthodoxy for Isaan? Thus, to address this apparent gap in research, an attempt was made to elicit the views held by certain representative sub-sections of Thai society, garnered through the vehicle of a targeted questionnaire based survey conducted at three separate locations during the early part of 2010 (see Chapter 4, Section 4.3.3). A small selection of the findings of this survey (undifferentiated by location or other variables measured) are interpreted below¹¹⁷, although a more complete tabulated version of survey responses by location are provided in Appendix C.

¹¹⁷ I choose to discuss only a fraction of the results in the interests of brevity, for what would otherwise take up a great deal of space to fully elicit.

In response to the first question, *“When you hear the word ‘Isaan’, what does it make you think of?”* (Table 1, Appendix C), 22.6 % of respondents included “drought” in their answers, which placed it equal importance to “language” in fifth place in terms of association. The common regional name sparked the strongest correlation in people’s perceptions with “food and eating” connotations (59.9 %), followed by “culture and traditions” (34.1 %), and “agriculture and farming livelihoods” (30.9 %) in third place. By comparison, immediate association of Isaan with “poverty” was only mentioned by 4.5 % of the respondents, suggesting a weak linkage for most people, but there was a relatively strong correlation for “drought”. The top responses given tended to be positive associations, so the fact that over a fifth of people answered “drought”, seems to be of significance. It was noted that the level of association with drought was higher in the Bangkok and Khon Kaen sample groups than in the Nam Songkhram village surveyed, even though the latter was mostly composed of people directly involved in farming livelihoods.

By contrast, when respondents were asked *“What do you think are the most important development problems that affect the Isaan region?”* (Table 2, Appendix C), the most popular response was “drought and water scarcity” (43 %), well ahead of the next two categories “education” (35.5 %) and “poverty and low income” (34.2 %) in second and third places respectively. This indicates a strong positive correlation between regional perceptions of water scarcity and poverty problem narrative framings at both the central (elite) and local levels. Significantly, respondents in the Nam Songkhram floodplain village responded most positively to perceiving “drought and water scarcity” (53.8 % of respondents) as the most important regional development problem, perhaps responding to concerns of immediate self-interest, given that the survey took place during the dry season when local competition for irrigation water for use in dry season rice cultivation was at its maximum (see Table 4, Appendix C for apparent confirmation of this). The only place where “drought and water scarcity” (30.4 %) was not the top category was in Khon Kaen, where it was a distant second to “education” concerns (53.4 %), again suggesting a degree of self-interest by respondents in this university city.

Interestingly, perhaps, “water resources management” issues were not considered an important problem in any location and only 2.7 % identified this category, putting it slightly ahead of the last category of “culture, religion, morality and family” related

issues in twelfth place. This suggested that concerns about water supply far outweigh any concerns about its management in people's perceptions, which again matches the dominant discourse, which is supply oriented.

When the question was narrowed to "*What do you think are the most important development problems related to water resources management in Isaan?*" (Table 3, Appendix C), once more "water scarcity problems" (including both agricultural and domestic water) was easily the most common response at 48.6 % of respondents, far ahead categories of "poor water management practice / knowledge at the local level" (27.1 %) and "poor irrigation and water delivery systems" (26.1 %) in second and third places respectively. Again, perceptions of water scarcity and drought being most important were highest (61.1 %) in the Nam Songkhram village, which relatively-speaking is a village blessed with abundant water resources. That such a high percentage identified water scarcity as the most important issue in all three locations, above other water resources management issues which an external perception might identify as being serious (e.g. "demand-side problems and conflict" or environmental decline and degradation") again tends to suggest an ideological process at work. The second placed category of "poor water management practice / knowledge at the local level" again fits in with the dominant state ideology, which consistently blames the water end users for management failures (e.g. an ignorant or uneducated farmers' narrative) and fails to consider more structural causes of failure further up the hierarchy.

Interestingly, when people were asked what they understood by the term "drought" (Table 5, Appendix C), most people responded that they understood it to mean a shortage of water for domestic consumption (35.2 %), with slightly fewer people overall understanding it to mean "insufficient water for agricultural usage" (29.6 %), although in the Nam Songkhram village this figure was much higher at 48.1 % of respondents, suggesting a strongly utilitarian narrow view of drought, rather than a more nuanced definition including meteorological or hydrological factors. A surprisingly high number of people responded that they associated drought with destruction of natural resources, especially forest loss (29.3 %), (i.e. a cause, rather than a symptom of drought), which suggests the popular perception has a strong correlation with the official state and elite-backed narrative linking water scarcity with forest destruction (see Forsyth and Walker, 2008). The fourth most popular

response coincided more closely to standard meteorological drought definitions i.e. “rain does not fall according to season or low rainfall” (25.7 %), which corresponds closely with official definitions proposed by RID officials I interviewed. Amongst people who perceived that drought in Isaan was worsening over time, the most commonly perceived reason explaining this phenomenon by a large margin was “deforestation and forest fires” (80.6 %) (again matching the dominant state narrative), followed in distant second place by “climate change and global warming (39.6 %) and a general anthropogenic category of “caused by humans” (31.3 %) in third place (see Table 7, Appendix C). Again, such answers coincide with the dominant elite-propagated environmental orthodoxies concerning causes of perceived water scarcity in Thailand, which places primary blame on villagers for deforestation in the uplands and rarely considers changes in sectoral water demand (Hirsch, 1997; Walker, 2003)

When I posed a similar question regarding the popular notion of Isaan being considered the driest region of Thailand to the Chairman of Tha Bor Songkhram TAO¹¹⁸, and whether this was a fair or accurate description either regionwide or in locally in the lower Nam Songkhram basin, he provided the following answer:

“It’s true! It’s so arid. In the dry season there’s virtually no water in the lakes or wherever. It’s dry, drought! Who will come and help? The government doesn’t! The MP doesn’t! We have a representative, but there’s almost no budget coming down to us..... Dry; it’s so arid! We just sit and wait for the rains. And when the rainy season comes, we still await the rains. In the dry season, who can we ask for rain as there isn’t any water? Nobody comes to help us! When it’s dry, it’s so arid....like in the past, I saw the MP and he said, “Hey, I’ll give you a pump for pumping out of the lake”. But that’s all we got.....”

Source: Boonhong Chaibin, Chairman, TAO Tha Bor Songkhram Sub-district, Nakhon Phanom Province. Interviewed 20 July, 2010.

Regarding the causes of drought in Isaan, another local politician offered the following response, concurring with the primary cause identified by the king and state officials as well as ordinary citizens in the survey (Table 7, Appendix C), illustrating how dominant narratives are reproduced from the centre to the periphery.

¹¹⁸ Tha Bor Songkhram Sub-district is located in the middle of the lower Nam Songkhram Basin wetlands which experiences average rainfall of about 2,000 mm per year and has some of the most abundant water resources in the whole of the Northeast.

“Looking at the drought situation, the people now understand that cutting trees and destroying forest causes drought. Rain doesn’t fall according to its season anymore. This is the truth.”

Source: Sgt-Major Amphon Khamwongsa, Deputy Chairman of the Na Hua Bor TAO, Phanna Nikhom District, Sakon Nakhon.

Interviewed 25 June, 2010

Such responses by local leaders underline the extent to which the dominant narrative around regional water scarcity and drought has come to define perceptions within the Northeast, even in areas like the lower Nam Songkhram Basin considered nationally important wetlands with relatively abundant annual rainfall and multiple local natural and artificial water sources (Blake and Pitakthepsombut, 2006a; Blake et al., 2009). It also indicates how constructions of scarcity are reproduced by local elites and ordinary citizens at the margins, closely reflecting the ideological discourse of national elites. Mr Boonhong was a strong advocate of more state-supported infrastructure development irrespective of scale it transpired, including the Nam Songkhram Project (see Chapter 8, Section 8.4) and national Water Grid project, and his views should be compared with those of the Sri Songkhram MP he was criticizing (without naming him) quoted at the start of this chapter, illustrating the discourse is related to power and authority. The findings of the survey resonate with findings from Lipchin (2007) using a similar methodology in Israel, which indicated through a questionnaire survey of kibbutzniks that Zionist-inspired ideological values around the importance of agricultural development as an integral part of state security at the national level were reproduced at the local level.

6.8 State solutions to dominant problem framing discourse

Having established the basis of the problem-framing “meta-discourse” leading to particular irrigational approaches to development (the “solution”) as being first and foremost the “poor and dry” narrative (Molle and Floch, 2008a; Molle et al., 2009a), I now briefly highlight several other secondary meta-justifications previously identified by Molle et al (2009a): food self sufficiency, national security, “modernization” and ill-defined “fights against poverty”, readily adopted by national politicians. A further consistently employed narrative used to justify a standard state-

centric approach to irrigation development, relies on making comparisons of the Northeast's ostensibly low irrigation coverage with other regions. The argument runs that because of the region's naturalized water scarcity problem and an "unsuitable topography" for water storage reservoirs and gravity-fed irrigation, only limited irrigation development has been possible compared to the North and Central regions. The total present irrigable area amounts to half the national average and one seventh of the Central region (see Table 6.1 below), and therefore, much more effort and budget deserves to be directed towards hastening regional irrigation development, but by employing novel and different technologies and approaches than in the past, including stepping up attempts to tap the "unlimited" water resources available in the Mekong River mainstream (see Section 6.8.1). It has sometimes been portrayed as a kind of moral imperative for the entire nation to help the impoverished and rainfed agriculture reliant Northeastern people catch up with their wealthier compatriots in other regions (see Carabao song lyrics above), by urgent state-led introduction of irrigated agriculture to thousands of drought-struck villages (e.g. Hirunruk, 1999), in a version of "let the desert bloom" syndrome (Molle et al., 2009a).

Region	Farm Area (ha)	Irrigated Area (ha)	% area irrigated
Central	2,449,600	1,801,600	73.5
North	4,400,000	900,800	20.4
East	1,676,800	328,000	19.6
South	3,062,400	539,200	17.6
Northeast	9,240,000	932,800	10.1
Total	20,844,800	4,502,400	21.6

Source: (Adapted from Turrall, 2008:24)

Table 6.1 Total cultivated area and irrigated area by region in Thailand

State development narratives have almost invariably focused on promoting supply-side solutions to the perceived problem of water scarcity, a pattern that can be traced back over many decades to an entirely different geo-political era, itself often drawing on narratives that were mixed up in competing ideologies and interests, that relied on foreign "expert knowledge" which on examination often turns out to be based on little substance or understanding of local conditions, but reproduced earlier

orthodoxy. Take for example, the quote below extracted from a RID report justifying the need for the Lam Nam Oon Irrigation Project in Sakon Nakhon (see Chapter 8, Section 8.3), that used as its “guarantee” of appropriate development, an FAO study from eighteen years before:

“Since there is insufficient flow during the dry season and too much flow during the rainy season, so the cultivation in this region can hardly be successful without storage reservoirs. The Royal Irrigation Department has been considering small reservoirs and irrigation tanks as the most suitable and most effective means of water conservation. It is the policy designed to achieve raising the income and living standard of the Northeast people by providing sufficient water for irrigation and domestic use, by minimizing flood damage, and by increasing thereby the value of cultivated lands. This plan of development as laid down and practiced by the Royal Irrigation Department was checked and assured by the F.A.O. Mission to be the most practical mean [sic] as shown in their report in 1948.”

(Source: Royal Irrigation Department, 1966)

Molle et al (2009a:271) have argued in a detailed review of the “remarkable regularity” in the promotion of large-scale water resources development in the Northeast linked to the pervasiveness of political and ideological interests over the last half century, that the RID “created a culture in where floods and droughts automatically translated into proposals for more dams and more irrigation schemes.” To illustrate a range of rhetorical devices that a powerful bureaucrat may call upon to justify further infrastructure development, I refer to parts of an interview with an ex-Director General of the RID, Chulajata Roongrueng, cited in Molle et al (2009a:265-6):

“At present, the quantity of water is not sufficient because of an increase in the population which has led to more demand for water.....And because many forests have been destroyed, water cannot be retained. So it became necessary that we build a big reservoir to retain water for the dry season.....The increased population has led to more agriculture and more demand for water. It would be good if people were not born. But since the population has increased, everything has been affected. However, water is a necessity. When there is a water shortage it is the RID which is responsible for it. We have tried to propose every

solution to solve the problems.....Nowadays, in the IMF [International Monetary Fund] era, the population in Bangkok has decreased because some people have gone back to agriculture. But they would not have water if the RID did not provide them with water sources. How could we survive? Luckily, the RID has prepared for this.

I think we are lost. Many people have imitated foreigners. They want to preserve resources without them being fully developed. It is necessary to develop everything to its full capacity before preserving it. If we preserved our natural resources, what could we use? Would you want to buy them from elsewhere?..... Many people ask why we want to do it [inter-basin diversion project]. It is because it is a duty we have been assigned. We have learned to find water for you, not for ourselves. You live well right now because of what we have done in the past.”

Adopting neo-Malthusian narratives about population growth and resource scarcity fear mongering as a way to justify further development is not uncommon amongst elites, nor is the nationalist and xenophobic argument that water resources problems have arisen because Thailand has tried to “imitate the West” in its governance system, such as conserving (“preserving”) natural resources, before they have been fully exploited/developed. This narrative is often inserted alongside the idea that Thailand is somehow a bastion from the evils of globalization through pretending it does not already rely on imports of numerous raw materials, drawing heavily from the king’s “Sufficiency Economy” narratives. The irony of this argument, however, is that several of the RID’s largest and most hyped development projects appear the antithesis of “Sufficiency Economy” philosophy projects, as they will depend on water imports and transfers from neighbouring countries or transboundary rivers (e.g. the Mekong and Salween). However, the RID is not alone as a bureaucracy in working towards a goal of looking beyond Thailand’s borders for additional water supplies to slake its insatiable thirst for irrigation development (Floch and Blake, 2011).

6.8.1 Future irrigation development imperatives based on a static discourse

There has long been a sense amongst Thailand's development planners, both domestic and foreign, that the Mekong River holds the key to the hydraulic development of the region, as a means to unlock a latent prosperity. Ever since the late 1950s, when formative studies by the United States Bureau of Reclamation (USBR) and the Army Corps of Engineers were conducted along the middle and lower reaches of the mainstream Mekong and drew up plans to replicate the Tennessee Valley Authority (TVA) model of river-based development¹¹⁹, there has been a strong belief evident amongst senior Thai state technocrats and bureaucrats that the future prosperity of the Northeast region was dependent on damming the Mekong. The studies indicated that there was the potential to construct a cascade series of ten to twelve large dams, which would facilitate the hydraulic control and water abstraction possibilities for hydropower, irrigation, flood control and navigation purposes. The Mekong was perceived as a "sleeping giant" and "river of promises", and its development "required effort to convert the wasted and destructive powers of the Mekong untamed, into a giant tamed and harnessed to the uses of mankind" (Molle, 2008a; Molle et al., 2009c). The "flagship" dam of the cascade was to have been the gigantic Pa Mong Dam, planned for a stretch of river between Thailand and Laos which would have an installed capacity of 4,600 MW and have the potential to irrigate two million hectares of farmland in the Northeast (Molle and Floch, 2008a). Bureaucratic agencies were created with foreign development assistance to assist in turning this dream into reality, such as the National Energy Authority (NEA) (Sneddon, 2003b). The following quotes extracted from a paper by Sneddon, capture the hubris with which powerful American and Thai actors at the time injected into political imperatives to dam and divert the Mekong.

"Of all the four countries situated in the lower basin of the Mekong, Thailand is the one that has the most urgent need for the development of irrigation in its northeastern region.....If large-scale cultivation of crops requiring a significant quantity of water is contemplated the only

¹¹⁹ This model called for "comprehensive", "integrated" and "efficient" river basin development for the Tennessee River, as the best route to promoting "grassroots democracy" (Molle et al. 2009).

way of assuring such supply will be to tap the flow from the Mekong” (USBR, 1956, cited in Sneddon, 2003b:2238)

“It is truly the Mekong River itself that holds the key to the prosperity of the northeastern part of Thailand as well as to our national power supply in the coming decades. Our interest in, and support of, the Mekong Committee is firmly rooted in that premise.” (Dr Boonrod Binson, quoted in Mekong Committee, 1972, Sneddon, 2003b:2239)

“In the long run, Thailand’s well-being will depend in no small measure on the Mekong. One single dam, such as Pa Mong could provide a massive block of power to meet essential needs....in the future only Mekong water, stored behind a mainstream dam, could sustain the irrigation development needed for that region to produce enough food, rather than becoming a liability to the rest of the country.” (Mekong Secretariat, 1977, cited in Sneddon, 2003b:2240)

However, even back in the 1960s, doubts about the wisdom of these hydraulic engineering dreams surfaced and questions were raised whether the countries of the Lower Mekong Basin could “stand the luxury of monolithic concrete structures whose immediate return is inflation of national ego” (White et al., 1962). Yet, despite the growing emphasis on narratives from a variety of sources expressing environmental and social concerns in the intervening years, the old developmentalist discourse and irrigationalist visions remain alive and well, “entrenched in narrow conceptions of sovereignty” and, “only marginally swayed by contestation”, according to (Molle et al., 2009c). Recent narratives have repeated the old storylines, made more powerful by politicians either seeking election as a pork barrelling tactic, or once in office, using irrigationalist rhetoric to appeal to win over party colleagues, factions and most importantly, finance committees with the authority to approve funds, as a way to justify the imperative of the proposed pet mega-projects. This points to a perceived need to look beyond the agency of the hydrocracies alone to “mobilize funds and resources within the country on the premise of regional planning, rural development and irrigation development” (Mirumachi, 2012:92), but to also consider other political actors integral to pursuing the goals of the hydraulic mission. Below are two examples of politicians’ narratives of the desire to extend beyond Thailand’s borders to secure water, one relating to the

KCM Project (Prachuab Chaiyasarn) and one for the trans-basin Water Grid Project (Samak Sundaravej).

“The problem of drought in Isaan occurs because Isaan has little water. It can be compared to a person with little blood. The treatment method for someone with little blood is to give additional blood to the body. Isaan at the moment has big veins; that is the Chee River and the Mun River. Both rivers have little water. Therefore, it is necessary to find water elsewhere to add to them, such that the water source that is best for this transfusion is the Mekong River.”

Quote attributed to Prachuab Chaiyasarn, Minister of Science, Technology and Environment. Source: (Ministry of Science Technology and Energy, No date)

“Mr Samak said the project was realistic, given what Israel had done by turning its arid areas into fertile farmland, and vowed to make it possible even though he could possibly face criticism from environmentalists.

‘I am not too ambitious. State agencies involved, especially the Royal Irrigation Department, must seriously help us undertake it,’ he said.

‘Were I not prime minister, I would not have an opportunity to push for this project,’ he added. He said he did not care about opposition from non-governmental organisations.”

Source: (Charoenpo, 2008)

The second citation above is taken from a February 2008 news report in the Bangkok Post, quoting newly elected Prime Minister Samak Sundaravej who vowed his government would spend at least 500 billion baht (c. \$16.3 billion) on mega-projects, including resuming a project started by ex-Prime Minister Thaksin Shinawatra, the main financier of the People’s Power Party (Phak Palang Phrachaachon) he headed, namely a national water pipeline project using water diverted from the Mekong river, formerly called the Water Grid Project. Samak drew as his comparative model the example of Israel, and repeated a “desert bloom” narrative, underlining once more the ideological nature of the discourse; and true to his bombastic and confrontational past, stressed that he had little concern about any civil society criticism, while underscoring his authority.

While the Water Grid Project has yet to be implemented, like its historical precursors, the discursive legacy of these projects is still very much alive in the rhetoric of the present government, now headed by Thaksin's younger sister, Yingluck Shinawatra, who has announced plans to spend \$11 billion on a "comprehensive water management system" for the country at a Water Management Exhibition she opened in Bangkok in late August, 2012 (Royal Thai Government, 2012). This announcement is almost certain to stimulate optimism amongst engineers and technocrats within the Department of Water Resources and Royal Irrigation Department that their blueprint plans to divert water from the Mekong or Lao PDR into the Northeast may yet come to fruition (Floch and Blake, 2011).

6.9 Summary

This chapter has illustrated how powerful state-aligned actors have framed the problems of Northeast Thailand in particular ways, to create "off-the-shelf narratives" (Fairhead and Leach, 1997) or "received wisdom" (Leach and Mearns, 1996), that simplifies socio-ecological ambiguity and uncertainty to help facilitate the political goals of certain dominant actors and are used to justify certain techno-centric developmental solutions. The region's orthodox development discourse has conflated regional economic poverty with natural resource scarcity, in particular placing a strong emphasis on an ill-defined narrative of water scarcity, which has taken on the status of a "received wisdom" and integral part of the popular regional lexicon. An "Isaan is arid" (*Isaan haeng laeng*) cliché is found to be almost ubiquitous throughout popular media, art, music, numerous academic accounts and state agency-generated literature, thus appearing commonsensical and beyond question, especially when backed up by the authority of the king and prime ministers. Communist insurgents and foreign invaders may have been successfully quashed in the communal imagination of the nation (Anderson, 2006), but Isaan's naturalized and universalized drought remains a static, perennial and unvanquished enemy, against which a war must be indefinitely waged. The reach of the development orthodoxy was highlighted by results obtained from the questionnaire survey that indicated the Northeast was closely associated with narratives of drought and water

scarcity in the worldviews of ordinary people in Bangkok, Khon Kaen and the Nam Songkhram basin. Despite every conceivable technological intervention having been tried and tested over the decades since the development era began (Molle et al., 2009a), seemingly all with the same disappointing results when set against aims of their proponents, yet still the elusive quest for a regional irrigation development utopia to overcome scarcity continues unabated, constantly pushing towards the goal of diverting the waters of the Mekong river or rivers in Lao PDR. The next chapter follows the discursive fortunes and ideological struggles of one such “mega-project”.

Chapter 7 Greening Isaan - irrigation mega-projects and development discourse

“The idea of transforming the Northeast into a ‘promised land’ where poor farmers can grow rice and other crops and raise livestock to make enough money to sustain a traditional livelihood without having to travel to the city to make a living every dry season has never faded far from the minds of some caring north-eastern politicians.”

Source: Editorial in the Bangkok Post. 28 July, 2003. (Prateepchaikul, 2003)

7.1 Introduction

The previous chapter attempted to demonstrate how the development discourse in Northeast Thailand has traditionally privileged certain dominant narratives and knowledge constructions. This discourse has given rise to widespread social perceptions that the region suffers from more severe poverty than other national regions mainly as a result of chronic natural resources deficiency, in particular perennial drought and water scarcity, which has been demonized in the popular consciousness. The default developmental solutions offered by the hydrocracies in response to the orthodox problem framing has principally focused on privileging public irrigation infrastructure expansion across the region at all scales of intervention and use of multiple technological interventions over the past sixty years (Floch et al., 2007). A range of other supporting meta-justifications have been utilized for these projects, but the “*Isaan haeng laeng*” narrative and its supposed negative impacts on the livelihood of “poor farmers”, has been the most stable and reliable discursive device for closing debate by proponents of irrigationalism, as after all, who would claim to be against poverty alleviation? Numerous Thai leaders have used this meta-justification to their advantage in the past as an effective means to stifle opposition (Molle et al., 2009a).

These projects represent material and symbolic embodiments of the ideology and discourse of irrigationalism in Thai society, both revealing and concealing stories of unequal power relations, struggle and contestation. To illustrate how the hydraulic development discourse proceeds in practice at the regional and national levels during

one particular critical phase in recent Thai history, in this chapter I draw on the case of one specific pan-regional scheme (the Green Isaan Project) and apply a historical narrative analysis from its genesis to the nominal demise of the scheme, based on a critical examination of media coverage of the project in the English language daily press¹²⁰. As such, this chapter starts to explore some of the dynamics of control over development between the actors and actor groups involved, both in support of and opposition to the scheme, and thereby attempt to address the following research questions:

SQ2: What are the main development narratives driving *irrigationalism*, framed by different actors, both historically and in the present context?

SQ3: Which actors appear to determine control over irrigation development at multiple scales, using what discourses and pathways?

SQ5: To what extent are understandings of water scarcity socially constructed and whose interests are served by drought narratives?

7.2 Regional irrigation mega-projects – a recurring syndrome

There is an underlying assumption supporting the large-scale projects proposed for the Northeast that irrigation development, as an ideological goal in itself, can contribute to regional poverty eradication and national security (See Figure 1.1 in Chapter One). The meta-discourse and some of the principal actors involved in these projects and programmes have been previously identified by Floch et al. (2007), Molle et al. (2009a) and Sneddon (2000), and so I shall only briefly refer to the main projects here to give a sense of their continuous and recurrent nature. Starting with the proposed Pa Mong multi-purpose dam project on the Mekong mainstream conceived in the 1950s, to the Green Isaan Project of the 1980s, to the Khong-Chi-Mun Project of the 1990s, to the Water Grid Project of 2003-06 and most recently the competing twin variants of essentially the same scheme proposed by the RID and the DWR (refer to Fig. 7.1 below and Chapter 9 for further discussion), national

¹²⁰ For an evidence base, I relied primarily on the analysis of a collection of 64 scanned press cuttings taken mostly from The Nation and the Bangkok Post daily newspapers, dated between March 1987 and October 1989. I am indebted to Dr Kevin Hewison for providing this archive.

leaders have never failed to have a hydraulic development “mega-project” blueprint plan to call upon to claim the long term solution to the Northeast’s water woes was at hand and the arid land would be transformed to a lush, green oasis (Molle et al., 2009a). The principal variables that appear to distinguish these instrumental, agro-managerial projects are their given name and the particular confluence of actors and organizations whose commercial and ideological interests will be closest served by the project.

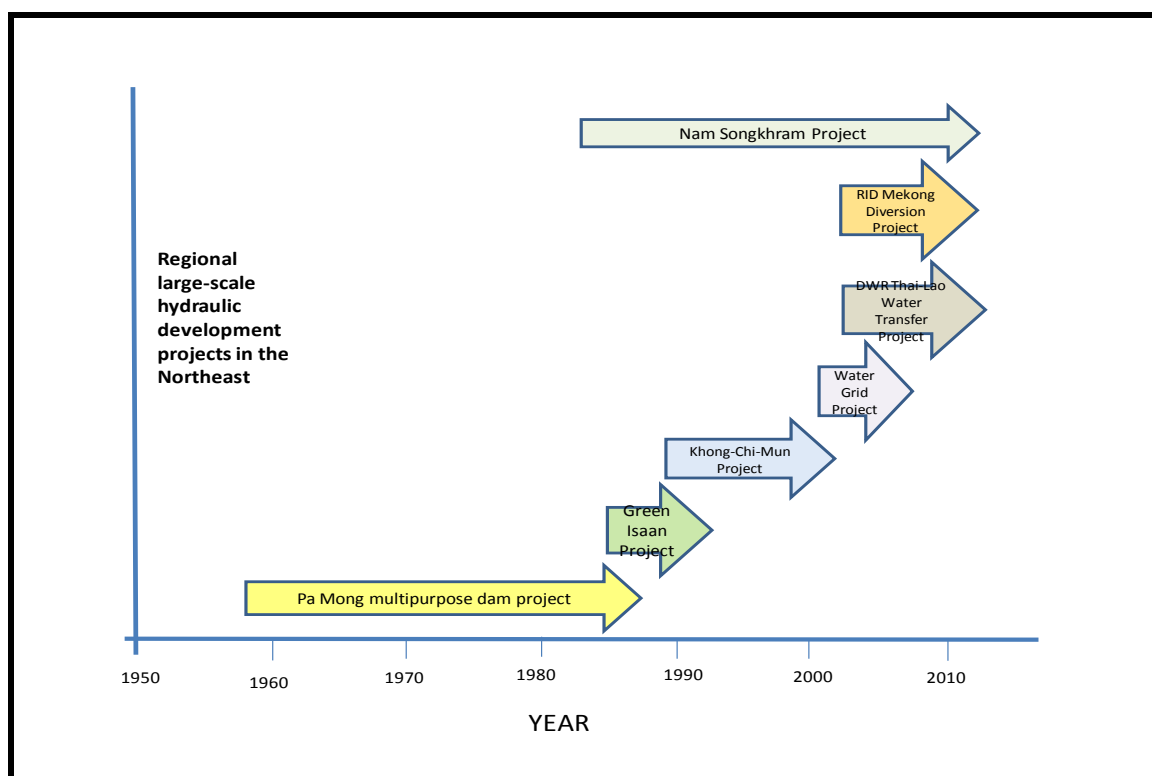


Fig. 7.1 Chronological timespan of the major large-scale water resources development projects proposed (and in some cases partly implemented) in Northeast Thailand, starting from the late 1950s up to the present day, illustrating the remarkable continuity of the regional hydraulic mission.

In this chapter, I have selected the Green Isaan Project primarily because it has been comparatively less scrutinized than subsequent major water resources development project variants, such as the Khong-Chi-Mun Project (Sneddon, 2003b) and the more recent Water Grid Project (Molle and Floch, 2007; Molle et al., 2009a), yet offers a stark and illustrative case study of the political actors involved, their narratives and practices of discursive contestation that emerged. As Sneddon (2000) has argued, water resources development programmes embedded within the wider state regional development trajectory have often been at the root of social conflicts in the Northeast,

but are frequently overlooked by social scientists as important arenas of political struggles over the environment, compared to forests or land rights issues for instance. As such, it offers a historical window into the rationale, justifications and discursive practices that were utilized by dominant players in a bid to ensure its ideational continuity as a development trope for the region, even when it was not physically constructed in the short term. In addition to the mainstream narratives, I also attempt to identify some of the counter-narratives that emerged to challenge certain aspects of the project and led to political in-fighting between interest groups.

7.3 The Green Isaan Project – discursive roots

“What's important to understand at the political level here is to understand that the north and northeast of Thailand is and always has been the poorest region of Thailand, the driest region of Thailand and there's a certain pork barreling aspect here of securing votes in northeastern Thailand by promising to green the northeast, just as the army used to say when it was looking at a similar type of scheme some twenty years ago.”

(Dr Philip Hirsch comments in ABC Radio interview quoted in Werden, 2008)

According to Molle et al (2009a), it was recognized during the Mekong Committee's reconnaissance early surveys of the Northeast, that the internal topography and general hydro-ecological conditions were ill-suited to the kind of grand development scenarios that had first been envisioned by basin planners wanting to enact a TVA-type hydraulic mission in the Lower Mekong Basin. By the 1980s, as the chances of implementing the Pa Mong Multipurpose Development Project with foreign donor funding became ever less probable with waning interest in the region from the USA as geo-political priorities changed, so the Thai government increasingly began to consider hydraulic mission options within its borders that did not require damming the Mekong (Molle and Floch, 2008a). Simultaneously, the government was attempting to shed an autocratic image as a “security state” gained under successive military regimes and encourage a gradual shift to a more liberal, participatory parliamentary democracy based system, where private enterprise and civil society

had more of a role to play, albeit under a system of what Connors (2003) termed “*democrasubjection*” of the citizen by the national elites. It was in such a changing context of governance discourse that the regional development scheme alluded to by Hirsch in the quotation above emerged, premised on combined discursive concerns about national security, poverty alleviation, development and export-led agribusiness growth, and later became known as the “Green Isaan Project” (*Khlong-gan Isaan Khieow*).

References to a project conceived to help fight poverty in the “arid” and “drought-stricken” region¹²¹ first appeared in media articles in late March 1987, during a temporary period of localized water scarcity in some rural parts of Northeast Thailand¹²². At this time, the country was run by an unelected regime comprised of a mix of military and civilian elites close to the palace and headed by General Prem Tinsulanond¹²³, who led Thailand through a period of prolonged economic growth and relative stability. The government tokenistically responded to this “critical” water shortage situation by sending a convoy of military trucks loaded with water-filled tanks from Bangkok¹²⁴ (Bangkok Post, 1987h). Draped along the sides of each truck were large banners bearing the message: “Generosity from the King” (*nam prathai*¹²⁵ *jaak nai luang*), (Bangkok Post, 1987f:1). A news report a few months later suggested that the project concept had been born on March 25th 1987 at a funeral ceremony at a temple in Bangkok for soldiers killed while defending

¹²¹ A total of 28 from 64 newspaper articles examined for the period 30/3/87 to 7/11/87 indicated that “arid” and “drought-stricken” were the most frequently used adjectives to describe the Northeast (both appeared in eight articles), with “drought hit” appearing three times, and “drought affected”, “parched” and “persistent drought problem” appearing once each.

¹²² Early reports suggested the effects of the drought were mainly limited to four provinces, namely Nakhon Ratchasima, Khon Kaen, Mahasarakham and Roi-Et.

¹²³ Prem Tinsulanond (1920 -) is a career army officer originating from Southern Thailand who climbed through the ranks to become commander of the Second Army, a division heavily involved in fighting communist insurgency in the Northeast from 1977 onwards. He was quickly appointed army commander in 1978, having become a favourite royal confidante, known for his loyalty. In return for royal patronage, he strengthened the role and position of the monarchy in society, both financially and symbolically (Baker and Phongpaichit, 2005).

¹²⁴ Each of the 69 trucks were reported to be carrying 3,600 litres of water, i.e. a total of 248.4 m³. This quantity of water would theoretically satisfy the domestic demands of approximately 468 people (i.e. the size of a typical Northeastern village) for 10 days, assuming an average usage of 53 litres/person/day (Biwater, 1987). The population of Khon Kaen province alone was reported to be 1,627,000 persons in 1989 (National Statistical Office data). This illustrates the symbolic and tokenistic nature of the project from its start, which nevertheless managed to capture plenty of uncritical media attention in the English language press as if this rather absurd exercise would genuinely make any difference at all to rural water scarcity, real or imagined.

¹²⁵ “*Nam prathai*” (น้ำพระทัย) here takes on a double meaning, as “*nam*” (น้ำ) means by itself “water”, but as a conjunction with “*prathai*” (พระทัย) means “generosity” or “kindness”.

Thailand's borders¹²⁶, attended by the king who had "confided" to General Chavalit Yongchaiyudh (the Commander-in-Chief of the Royal Thai Army) that he was personally concerned about the drought situation in the Northeast (The Nation, 1987e). The king was reported to have suggested that, "the army, with its readily available vehicles and manpower, should take immediate action to alleviate the water shortage and co-operate with other government agencies in finding long-term solutions to the drought problem" (The Nation, 1987e:5).

Initially the project was simply portrayed as a short term and localized relief effort under the direction of the Royal Thai Army (RTA), through a combination of direct supply of domestic water to drought-hit areas and indirectly through artificial rain-making operations. In early April, General Prem himself reportedly oversaw water handouts to villagers (Bangkok Post, 1987g) and soon after ordered the formation of an RTA-managed "Centre for Directing Assistance to the People under the Royal Initiative", with responsibility for "drafting the master plan for the development of the Northeast during 1988 -1992" (The Nation, 1987e:5). An Army spokesperson for the Centre stressed that it had a "constitutional duty of participating in national development", and that its role was merely one of coordinating and facilitating the implementation of the "master plan". Other government agencies were expected to be the actual implementers of the project, with the RTA merely taking a coordinating position. Nevertheless, the Army felt obliged to underscore that it was in an ideal position to implement aspects of the project, due to its particular expertise and resources. For example, the Army Engineering Regiment was reportedly assigned to "conduct several experiments to help the development plan" which included using explosives to "dig a water hole" and "experimenting with rain-making rockets" at its weapons manufacturing centre (Bangkok Post, 1987c).

¹²⁶ In 1987, the Thai Army engaged Vietnamese soldiers in fighting on several occasions along the Cambodian border and with Lao and Vietnamese troops along a disputed part of the Thai-Lao border between December 1987 and February 1988, which became known as the Ban Rom Klao incident. Some estimates claim a thousand lives were lost in this short war (Source: http://en.wikipedia.org/wiki/Thai%E2%80%93Laotian_Border_War. Accessed 24 May 2012). Gen Chavalit was much criticised for his seminal role in this border spat, which may have been precipitated by a dispute over rights to logging by military-linked concessions.

7.3.1 An army-backed “master plan” appears and the project mushrooms

The RTA conceived “master plan” rapidly ballooned from a localized (but headline-grabbing) government response to what appeared a normal, seasonal water scarcity situation into a multi-million dollar, pan-regional development scheme within a matter of months. When it was first mooted, the estimated budget for the project was a rather modest 300 million baht (approximately US\$ 12 million), said to be paid for from savings made by the military through a reduction in the number of military personnel and restraint in the purchase of “300-400 new vehicles” (Bangkok Post, 1987a). Between April and June 1987, the predicted project budget multiplied 46 fold to 14 billion baht (approximately US\$ 560 million) and it was no longer simply a drought relief project in four or five provinces, but now envisaged a transformation of the entire Northeast from an arid and unproductive wasteland into a prosperous and fertile “green belt” (Bangkok Post, 1987c). The project master plan was presented to the Prime Minister and governors of the seventeen Northeastern provinces at a conference in Khon Kaen on July 4 1987 (rather ironically, this meeting on drought-relief was held in the middle of the rainy season). Prior to the meeting, Gen Chavalit (in characteristic melodramatic style), was reported to have told reporters that, “if he failed in the task on behalf of the people of the impoverished region, it would be better for him to be dead than alive” (Bangkok Post, 1987e).

The conference to launch the project, chaired by General Prem, was described as “the largest turnout of government leaders, military brass, senior officials, politicians and leaders of local mass organizations in the history of this Northeastern province” (The Nation, 1987i). In his opening address, Prem reminded the participants that cooperation between the people, the government and the military in the past had “succeeded in overcoming the communist threat”, and emphasized, “I hope every one of you here is ready to work for the well-being of the poor people in this region” (ibid.). The implication being that those expressing any opposition to this project would be obstructing the centrally-defined solution to regional poverty and thereby pose a threat to national security (i.e. securitizing the narrative). General Chavalit, given overall responsibility for drafting the master plan, told the gathered delegates that the sub-projects proposed under it “were basic things that needed to be done and

must be completed in order to achieve all the goals”. In order to allay fears that the project was to be an entirely military run affair and that the plan had endorsement from the very top, General Chavalit added, “The army will merely facilitate the implementation of these projects as a response to HM the King’s wish” (The Nation, 1987i) (a rhetorical device employed to close or silence debate).

The master plan initially envisaged spending two billion baht (US\$ 80 million) on “urgent” water resources development projects between 1987 and 1992, including digging and dredging ponds and water courses; constructing dams, reservoirs and irrigation canals; and drilling over 2,800 artesian wells (The Nation, 1987e). Next it classified “medium-term solutions” including, “developing small to medium-size sources of water, forming a special rain-making task force for the region, and establishing tap water systems for villages” (ibid.). Longer term solutions proposed the development of large-scale “water sources” (read: building major storage dams) on the upper Chi and Mun rivers and developing electric pumped irrigation schemes using water from the Mekong mainstream and other large tributary rivers. The combined costs of the medium and long-term projects were estimated at just over five billion baht (US\$ 200 million). The remaining budget for the project (i.e. 6.8 billion baht or US\$ 272 million) would be spent on “forest conservation” activities¹²⁷, with the ultimate goal of increasing forested areas in the Northeast from 14 % to 25 % by 1992 (ibid.). Thus Chavalit and the RTA were essentially presenting a *fait accompli* that offered little room for negotiation or compromise where the duty of Isaan politicians, local leaders and state agencies was essentially to pull together, settle their differences and start implementing the top-down plan without delay.

The choreographed manner in which General Chavalit presented the blueprint plan of “greening” the Northeast to his mentor and patron, General Prem as the Prime Minister, must have made it appear to those gathered that there was no real alternative to the project (a case of “TINA” (see Mehta, 2001)) and to oppose it would have appeared to be obstructive and running counter to the king’s wishes. After all, who could be against such noble aims and justifications as reducing poverty and fighting drought, so any avenues of rhetorical objection to the dominant narrative would have to incorporate alternative modes of resistance. An effective

¹²⁷ For a detailed critique of the forestry aspects of the Green Isaan Project and its successor, the much reviled *Khor Jor Khor* programme (1990-92), refer to Pye (2005).

narrative “problem closure” (Forsyth, 2003) had been achieved at the meeting through clever use of calls to national security, a sense of fighting a common national enemy to replace the vanquished and “unThai” communist ideology, plus use of the indisputable trump card of presenting a royal prerogative. Despite this, immediately after the meeting tentative opposition to the plan emerged from politicians who felt they were being excluded from the centrally planning and implementation process, with its potential feast of construction contracts, plus pork-barreling, voter legitimacy enhancement and rent seeking opportunities missed.

7.3.2 Overt criticism of project emerges from Northeast politicians

Over the days following the conference, a number of Northeastern politicians outside the government voiced scepticism about the army’s motives for taking the lead on the project, the likelihood of corruption and doubts whether the plan was realistic in solving the region’s poverty. One MP, Piyanat Watcharaporn (Ruamthai Party - Sisaket), argued that “most of the projects to develop the Northeast in the past failed because of corruption” and said that the government should be “ashamed” that the plan was army initiated (The Nation, 1987g). Another MP, Suwit Khunkitti¹²⁸ (Social Action Party – Khon Kaen) claimed to welcome the role of the army in implementing the plan, but thought the government should first have conducted a study to ascertain how past water resources projects had benefitted the people of the region and suggested “suppressed prices of agricultural products” was the main problem they faced (ibid). A third politician, MP Direk Lakkam (Democrat – Udon Thani), the Chairman of a “House Committee for the Study of Aridity in the Northeast” recommended that the project concentrate mostly on developing water resources through expanding “ponds”, digging irrigation canals, and “constructing dams to keep the water in the two rivers for agriculture instead of letting it flow into the Mekong River” and suggested increasing the budget to 50 billion baht (US\$ 2 billion) (The Nation, 1987k). These comments indicated that the regional politicians were on the same page ideologically as the royalist military, but merely that they

¹²⁸ Suwit went on to become one of the leading architects and advocates of the Water Grid project under the Thaksin Shinawatra government of 2001-06, when he was Minister for Natural Resources and Environment, a position he later temporarily regained in the Democrat-led coalition government (2008-2011), as leader of the For the Motherland (*Pheua Paendin*) Party.

were upset about not getting a big enough slice of the cake under the present plan. They took the military to task for consuming over a quarter of the national budget, surpassing the amount spent on health and education, and branded it just another self-serving political party using state funds to maintain its power base (Handley, 2006). To illustrate this point, cartoons appeared in *The Nation* daily newspaper around the same period depicting sardonic and cynical images of the hidden transcript behind the project, that were not apparent in the text of the main news reports (Figure 7.2 below).

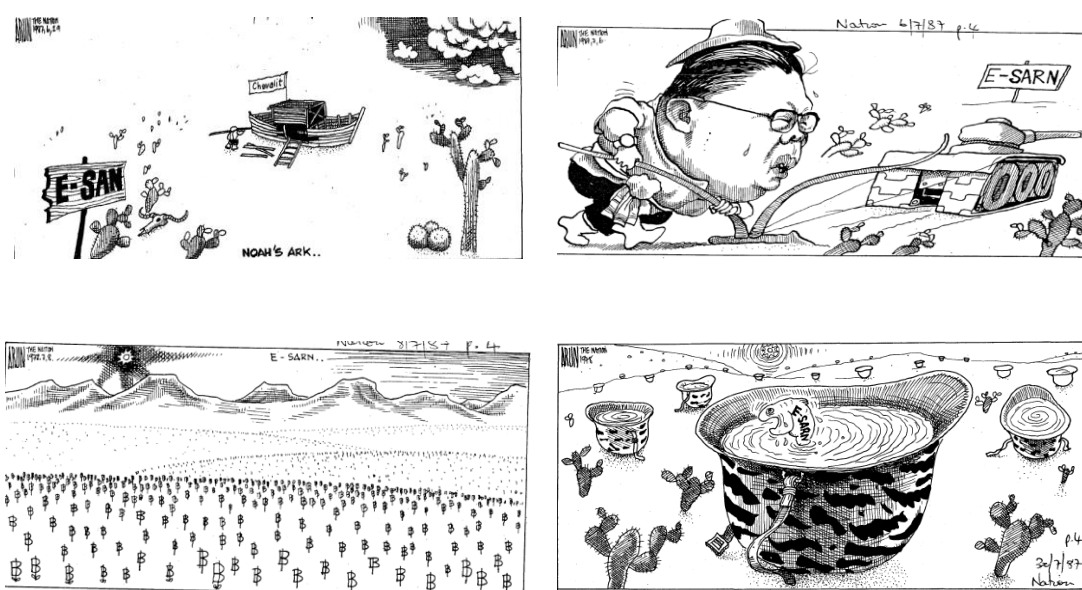


Fig. 7.2 Cartoons by the cartoonist “Aroon”, featured in *The Nation* newspaper between 29 June and 30 July, 1987, mainly lampooning the role of the military in the Green Isaan Project. The figure portrayed in the top right hand image is Army Commander-in-Chief General Chavalit Yongchaiyudh, who has remained the actor most synonymous with the Green Isaan Project.

The murmurings of dissent surfacing from opposition parliamentarians were met with refutations from RTA spokesmen and new actors emerged to offer their support, giving stronger affirmation of the palace’s involvement in the project. For example, Dr Sumet Tantivejakul¹²⁹, close royal advisor and Assistant Secretary-General to the

¹²⁹ Sumet Tantivejakul has been a close confidante of the king for decades, in his role as chief of the Royal Projects Development Board and past member of the National Security Council (Handley, 2006). He moved on from the NESDB post to become Secretary-General of the Chaipattana Foundation, an institution regarded as the king’s personal rural development organization (see Chapter 10 for more detail). He is also, reportedly, the current President of the Thai Rice Foundation under Royal Patronage (see <http://www.thairice.org/>).

NESDB came forward to defend the army's involvement in the proposed project, which he viewed as "a positive factor" and hinted that those who opposed it might be regarded as not playing a constructive part in national development. Responding to politicians' criticism, he added, "[S]ome skeptics may see it as a political move. But I think we have to be objective and broadminded to appreciate what the army is trying to do" (The Nation, 1987k). Prime Minister Prem also resolutely defended the army's involvement through the claim that with more easily mobilized manpower and equipment than other government agencies, only the RTA was uniquely placed to tackle the most urgent development projects (The Nation, 1987h). A government spokesman and staunch royalist, Mechai Viravaidya¹³⁰, commented that the master plan could be viewed as, "a good example of cooperation among government agencies in working towards a common goal" (ibid). General Chavalit was characteristically dismissive of the project criticism, stating, "I don't care what others say. Let's not worry about them.I'm confident we can turn the Northeast into a green belt with this master plan" (ibid). Yet again he tried to close the debate by referring to the project as "HM the King's Generosity Project", and reiterated that it was the king's wishes to see the plight of the poor Northeast farmers suffering from drought relieved (The Nation, 1987a).

As at the start of the "crisis" in March, the RTA gathered a large fleet of military hardware in central Bangkok in a symbolic display of renewed zeal for the development mission and drought eradication. On July 11 1987, a reported 200 vehicles and 1,000 soldiers were paraded before the media, prior to departure the following morning for deployment at the Third Army headquarters in Nakhon Ratchasima (Bangkok Post, 1987b). As if to underline the military's superior technical ability to win the battle against drought, the mute enemy, a spokesman for the RTA claimed that 120 teams of army engineers would use 6,000 pounds of explosives in digging 300 reservoirs, "where heavy earth-moving machinery cannot be operated" (ibid.). Furthermore, the army claimed it wanted to "experiment" with a "new type of rainmaking missile", which it hoped might prove cheaper than conventional aerial spraying techniques. However, Lt-General Charuay Wongsayant

¹³⁰ Mechai Viravaidya, is a wealthy scion of the Thai elite with corporate business interests, past Minister of Public Health and chairman of the quasi-NGO, the Population and Community Development Association (PDA), and has been the UNAIDS ambassador for several years. He is married to the King's Deputy Principal Private Secretary, M.R. Butrie Viravaidya (Stevenson, 2001).

(Deputy Chief-of-Staff of the RTA) estimated that the project would now cost in the region of 20 billion baht (US\$ 800 million), although the actual cost would not be known until 1989, “after government agencies work out details and seek financial support from the government in that year’s budget bill” (Bangkok Post, 1987b). It now appeared that the earlier certainty over the budget costs and plans presented a week before in Khon Kaen was already in doubt and the project was actually being planned on an *ad hoc* basis with fungible planning targets and little clarity¹³¹.

7.3.3 General Chavalit seeks new development partners for the mission

It was beginning to appear that ensuring the implementation of the “Green Isaan”¹³² master plan had become a personal crusade for General Chavalit. Reiterating earlier claims that failure was not an option, Chavalit stated in a TV Channel 9 interview, “[I]f (we) cannot develop the Northeast, (we) would rather die”¹³³ (The Nation, 1987b). In another article released the same day, General Chavalit stressed the importance of the Northeast region as “the frontline of democratic rule, the frontline of free trade, a frontline of not only Thailand, but also of the other countries in this region...” (Bangkok Post, 1987d). He emphasized political, economic and national security imperatives in a return to Cold War rhetoric of the past. When politicians again charged that the generals were merely trying to win political favour by implementing the project and the project’s scope was over-ambitious, Chavalit tried to dampen criticism by seeking another audience with the king (The Nation, 1987d). Denying any political motivation, he claimed his intention was only “to make people in the Northeast better off” and said the king’s main worry was the water shortage (ibid). This meeting with the king seemed to herald a new tactic to make the project

¹³¹ For example, as well as an increased geographical scope, the army were now predicting that the project would plant 850 million trees. If the 120 million rai (19.2 million ha) identified as degraded forestland in the Northeast was not sufficient for accommodating this number of trees, then the army claimed they would plant the remainder in other regions (The Bangkok Post, 12 July 1987).

¹³² At this point there was a subtle change in official nomenclature, with the scheme no longer being referred to as the “Generosity of the King” project, but named the “Green Isaan Project”. This name shift suggested a conscious attempt to distance the project rhetorically from the royal institution, perhaps as an insurance plan against any negative fallout, should it fail to achieve its objectives and create national discord.

¹³³ It was not clear who the “we” referred to in Chavalit’s quote – just the army, the government generally or perhaps the entire nation?

more politically acceptable, by bringing forward various non-military actors, both domestic and international to lend verbal support to the Green Isaan Project.

Firstly, the government recruited the cooperation of the Buddhist Ecclesiastical Council, which reportedly passed a resolution saying monks in the Northeast were ready to take part in the army's green belt plan (The Nation, 1987f). A month later it was announced that the Israeli Embassy in Thailand had invited a renowned water management expert, Aaron Wiener¹³⁴, to run a RTA organized workshop on water resources development in the Northeast for senior government policy makers from various water resources related agencies (Waring, 1987). Wiener reportedly suggested that the Thai government should become more goal-oriented, rather than resource-oriented in developing and managing regional water resources, and concluded it should, "focus on the integration of the rural population, not just on a limited area as past projects have done" (ibid). Shortly after, General Chavalit announced that China and "several other countries" had expressed an interest in assisting Thailand to implement the Green Isaan Project (The Nation, 1987j). Bizarrely, given his purported offer of help from China, few months later in November 1987 then started to openly court the "the rest of the Free World" for funding, using a thinly veiled threat that should foreign countries neglect to support the Green Isaan Project, then the Communist Party of Thailand would re-emerge to destabilize Thailand, and thus it was important to quickly "get rid of the remaining germs of future trouble" (The Nation, 1987c). He claimed a sum of 10 billion baht (US\$ 400 million) had been pledged from abroad, with Japan, Italy and "a few other countries" supposedly having offered to provide "soft loans" at an interest rate of 1.5 % per annum (ibid.). It also emerged that the UK government and private sector was heavily involved in the project, suggesting a number of other motivations for these nations' involvement beyond drought and poverty relief (see Section 7.3.4 below).

Besides claiming the support of foreign bi-lateral or multi-lateral donors for the Green Isaan Project, the RTA fund-raisers also campaigned for donations from domestic corporations, stressing its royal credentials. Some appeared eager to help,

¹³⁴ Aaron Wiener is an ex-academic and chairman of Tahal Consulting Engineers Ltd (Tel Aviv), a company involved in exporting Israeli expertise and technology in water resources management to developing nations.

perhaps sensing positive publicity and wider business opportunities arising from the association. Chaliao Yoowithaya¹³⁵, for instance, donated a reported 50 million baht (US\$ 2 million) to support the project. He justified his donation by stating, “[P]eople in the Northeast are poor and helpless. If they don't get some help, they will always live in hardship. But if they become stronger, they will have more purchasing power and that, in the end, will have a positive effect on the overall economy” (Thanyasiri, 1988:21). Other companies seemed to perceive similar potential rewards from publically supporting this project, both materially through cash donations and giving credence to the popular justifications. Peter Scharnell, General Manager of the Thai-Swedish Plantation Co Ltd, urged that no time should be wasted in commencing the project, “before the degeneration of soil in E-sarn gets worse due to the lack of water resources and appropriate conservation” (Khantong, 1988). Echoing the king’s concerns, Scharnell recommended that the solution to greening the region was the widespread cultivation of commercial eucalyptus plantations, as it could produce “more wood per acreage than other species under this tropical climate”, while cautioning that the tree might need more water than local species (*ibid.*). Other companies mentioned in the same article as sponsoring commercial wood plantations through the Thai-Swedish Plantation Co Ltd, included the Siam Cement Group¹³⁶ and the Shell Company of Thailand Ltd. Even commercial rock bands joined in to publically support the RTA’s goals and raise money for the Project (see Chapter 6, Section 6.6.1).

7.3.4 Involvement of UK interests and an “aid and trade for arms” scandal

The international commercial and national security aspects of the project took on an interesting dimension in 1988, when it appeared that the UK government, royalty

¹³⁵ Chaliao was a multi-millionaire owner of a beverage company producing the energy stimulant drink *Grathing Daeng* or “Red Bull”. Coincidentally, perhaps, *Grathing Daeng* was also the name of one of the most brutal and feared Thai right-wing vigilante groups of the 1970s and 80s, which participated in the bloody crackdown against student protesters at Thammasat University in October 1976 (see Baker and Phongpaichit, 2005)

¹³⁶ The Siam Cement Group (SCG) is described as one of Thailand’s leading companies and in 1986 was the largest industrial conglomerate in Southeast Asia (Handley, 2006; Ouyyanont, 2008). It has long held direct interests in the pulp and paper industry and promoting commercial production of the raw material, especially eucalyptus. SCG is largely owned by the Crown Property Bureau and in 2005 was valued at 87.8 billion baht (US\$ 2.16 billion) (Ouyyanont, 2008).

and corporate business interests were embroiled in the scheme. It emerged that the British engineering consulting company Biwater Limited had been hired by the NESDB to write a development “master plan” for the Northeast, which later morphed into the Green Isaan Project. Curiously, Biwater’s involvement in the project planning process pre-dated the first public announcement of the project, according to anecdotal evidence from a handover speech for an exhibition on the project held in Khon Kaen during May 1988 (The Nation, 1988c), suggesting the RTA’s first drought relief mission to the four provinces in March 1987 was merely a convenient front for a plan the government had been hatching for some time. It was reported that the exhibition had been officially opened by HRH the Prince of Wales¹³⁷ in February 1988 at the Regent Hotel in Bangkok. Dick Bourton, director of Biwater, noted, “[I]t was some two years ago that we first had discussions with the NESDB regarding E-Sarn. During the second half of 1987, Biwater carried out an intensive study of the region and prepared a strategy for development covering all sectors relating to land and water resources, at peak involving 100 British and Thai consultants, engineers, specialist advisors and technicians” (ibid.). By the opening of the exhibition, the company had already submitted a 13 volume report¹³⁸ to the NESDB that stressed “the need for precise integration and coordination of the sectors - agriculture, water supply, irrigation, forestry, fisheries and especially agro-industry” (ibid.).

Biwater’s (1987) report privileged the development of agro-industry alongside irrigation, arguing it would:

“.....produce the processed goods for regional export, create employment opportunity in the urban areas and create the demand for agricultural products.....Irrigation, required to produce raw materials for the agro-processing industry, will create wealth and job opportunities in the rural areas.”

¹³⁷ Prince Charles was officially in Thailand to attend the king’s 60th birthday celebrations. This link to the British monarchy further underscores the depth of involvement of the Thai monarchy in the Green Isaan Project and the complex entanglement of geo-political, military, economic and ideological interests in this scheme.

¹³⁸ Despite the high level of effort and resources that had been put into preparing this report, it subsequently became a rather elusive document, and extremely difficult to access. I obtained a copy of the Executive Summary from the Department of Water Resources library, but efforts to locate any of the reportedly “13 volume” report directly from Biwater itself suggested it had been buried. Email replies from company staff suggest that they could not find physical copies of this report and there appeared little collective memory of the study’s existence remaining (Cliff Stone, personal communication 7 January, 2011).

(Biwater, 1987 cited in Molle et al., 2009a:264)

However, Biwater's blueprint strategy for hydraulic development and agribusiness promotion in the Northeast apparently hid a slightly darker motive that perhaps explained the non-transparent nature of the planning process. It emerged that the United Kingdom was one of the "other nations" approached by the Thai government to financially support the project with grants and loans. The UK Conservative government assigned the Overseas Development Agency (ODA) to consider the Thai request for bilateral aid. In November 1989, Lynda Chalker, the then Secretary of State for Commonwealth and Foreign Affairs, responded to a parliamentary question about the government's relationship regarding the project that:

"The Government have indicated to the Government of Thailand its readiness in principle to provide aid and trade provision support for the Green E-Sarn development programme. This has involved discussions with Biwater who are actively pursuing contracts associated with this programme. The Green-E-Sarn project, while originally put forward by the Thai military authorities, is a civil project for rural development in north-east Thailand, and is the responsibility of the National Economic and Social Development Board of Thailand: there are thus no military implications for the Department to assess"

(Source: House of Commons Hansard debates written answers:
<http://www.parliament.the-stationery-office.co.uk/pa/cm198889/cmhansrd/1989-11-14/Writtens-2.html>
Accessed 29 March, 2012)

However, it appeared that it was not only Biwater that was "actively pursuing contracts" on the back of the Green Isaan Project bandwagon, but several other British transnational arms business interests were intimately involved (Molle et al., 2009a), a matter that had originally prompted the parliamentary question to the Minister. It transpired that in July 1988, Prime Minister Margaret Thatcher¹³⁹ had visited the Defence Asia exhibition in Bangkok in the company of her Defence Minister, Lord Trefgarne (The Nation, 1994). An article in the Sunday Times of 6 March, 1994 reported that Britain and Thailand were negotiating a military assistance programme that involved a consortium headed by British Aerospace and

¹³⁹ Her visit to Thailand happened to coincide with a regime transition between General Prem's royalist-military government and General Chatichai's elected government, so she was actually greeted by both leaders (Source: <http://www.margareththatcher.org/document/108221>)

GEC-Marconi (ibid). Thus, it could be construed that General Chavalit's motives in November 1987 for stressing the national security imperative to justify the army taking the lead on the Green Isaan project obscured a far more complex picture. In 1989, a soft loans protocol under Aid and Trade Provisions (ATP) was signed between the two countries prior to the British commitment "in principle" to offer funding for the Green Isaan Project, noted by Chalker in the quote above. Molle et al (2009a:269) reported that "Thatcher's government was ready to grant US\$100 million and provide a loan of US\$500 million for the project if agreement was found on a major package of military equipment purchase". In the event, Thailand declined to purchase British arms, instead opting to sign an agreement with the USA for fighter jets and other hardware (ibid). In 1990, a report in *The Daily Telegraph* confirmed that support for the Biwater bid had been linked to an arms deal (Hewison, 1994), in a manner not dissimilar to the better publicized Pergau Dam scandal in Malaysia. A report on the Pergau Dam Inquiry conducted by the House of Commons Foreign Affairs Committee found that there was a common pattern of linking aid and arms deals by the British government, through the ATP, in a number of different countries across Asia and elsewhere (World Development Movement, 1995).

The entire Byzantine episode suggested that there was a pre-existing agenda behind the Green Isaan Project that had been systematically obscured from the public up to the point of the public announcement in mid-1987. The interests involved seem to trace back to a strategic group consisting of royalist-military elites and its close strategic allies in business (some through the Crown Property Bureau), foreign corporate capital (particularly the arms export and hydraulic construction industry), bilateral aid agencies, highest echelons of the British political establishment and even incorporating the monarchies of both nations. This alliance of elite interests, tends to support the concept proposed by McCargo (2005) of a dominant political network operating in Thailand between 1973 – 2001 that he calls a "network monarchy" (this concept is explored in further detail in Section 10.10, Chapter 10). However, it seems that the dominant group pushing the Green Isaan agenda, had not quite anticipated the level of resistance from Isaan politicians and an increasingly vocal civil society, both of whom perceived that they had been excluded from the negotiations, planning and implementation of the project and resented the RTA's monopolization.

7.3.5 Local opposition and resistance to the project emerges

Concurrently with the Prem government's promotion of the Green Isaan Project, generous state subsidies were being offered for agribusiness to relocate to the Northeast (Bello et al., 1998; Pritchard and Burch, 2003), tempted also by promises of cheap land, labour, tax incentives and subsidized irrigation infrastructure; so indications of widespread local unrest and opposition to the project were appearing. Not only private companies, but a variety of state enterprises (many of which were loss-making) and companies under royal patronage involved in agribusiness promotion received state subsidies for moving to the Northeast and stood to profit further from the Green Isaan agenda in both water and forest resources development. In mid-March 1988, it was reported that villagers' frustration at being forcibly relocated by state agencies from state forest reserves to make way for commercial eucalyptus plantations had boiled over, and a group of about 4,000 protesting villagers burned down a Forestry Department tree nursery and cut down eucalyptus trees in Buriram province (The Nation, 1988h). Pye (2005) notes that by the end of 1989, an estimated 500,000 rai (80,000 ha) of industrial pulpwood plantations had been established, by both private companies and a state enterprise, the Forestry Industry Organization (FIO). A whole wave of local protests dogged these commercial plantations in several Northeastern provinces between 1987 and 1990 period. This served to highlight the close affinity and collaboration between the military, high-ranking politicians, bureaucrats and corporate interests, including those tied to the Crown Property Bureau, described by Pye (2005) as forming "strategic groups"¹⁴⁰. At the same time, a counter-strategic group emerged, bringing together local village and farmer movements "into an alliance with student- and middle-class-based NGOs, which were campaigning on various environmental issues" (Pye, 2005:107), including dams, land-rights issues, mining and illegal logging in an era of growing domestic environmentalism (Hirsch, 1997). This was also a period marked by a re-emerging political consciousness and activism within civil society, as the internal conditions of freedom improved somewhat after years of repressive

¹⁴⁰ "Strategic Groups" are explored in more detail in the context of irrigation project development in Chapter 8.

military dictatorship and armed struggle following the 1976 Thammasat University massacre (Baker and Phongpaichit, 2005). A broad mix of ideologies existed amongst a burgeoning NGO sector, with the more radical amongst them supporting continued community resistance and direct confrontation with state authorities, while others believed the best approach was to work with the state to effect positive change and development (Phatharathananunth, 2006).

From early 1988 onwards, local opposition steadily gathered momentum against the commercial forestry and land rights aspects, but appeared less united or resolute in opposing the water resources sector developments¹⁴¹, although there were occasional reports that many of the army-dug ponds and reservoirs were failures due to being located at unsuitable sites on porous soils. A Thai academic observer I interviewed commented that many ponds and reservoirs in Northeast Thailand dug under the Green Isaan Project had been nicknamed by villagers as “*bor lom*” (literally meaning “air ponds”), referring to their inability to retain and supply water for irrigation (Vaddhanaphutti, interview, 8 March 2011). Overall, it appeared much of the opposition and conflict concerning the project was primarily focused on land rights, commercial forestry and forced resettlement issues, perhaps because most of the water resources projects carried out under it were relatively small-scale, as the government failed to raise the necessary funds to implement the longer term, large-scale projects recommended in the Biwater master plan (Fig. 7.3), including diversions from the Mekong River (Floch et al., 2007). It appeared that political contestation over control of funding was to become *the* major impediment to project progress and source of conflict between individuals and agencies vying to implement the project.

¹⁴¹ This is not to deny that during the same period there were also multiple state-society conflicts over water resources development projects occurring elsewhere in Thailand, but the Green Isaan Project involved a discursive struggle between factions over the scale of water resources development interventions recommended, rather than open or violent conflict as with the forest programme.

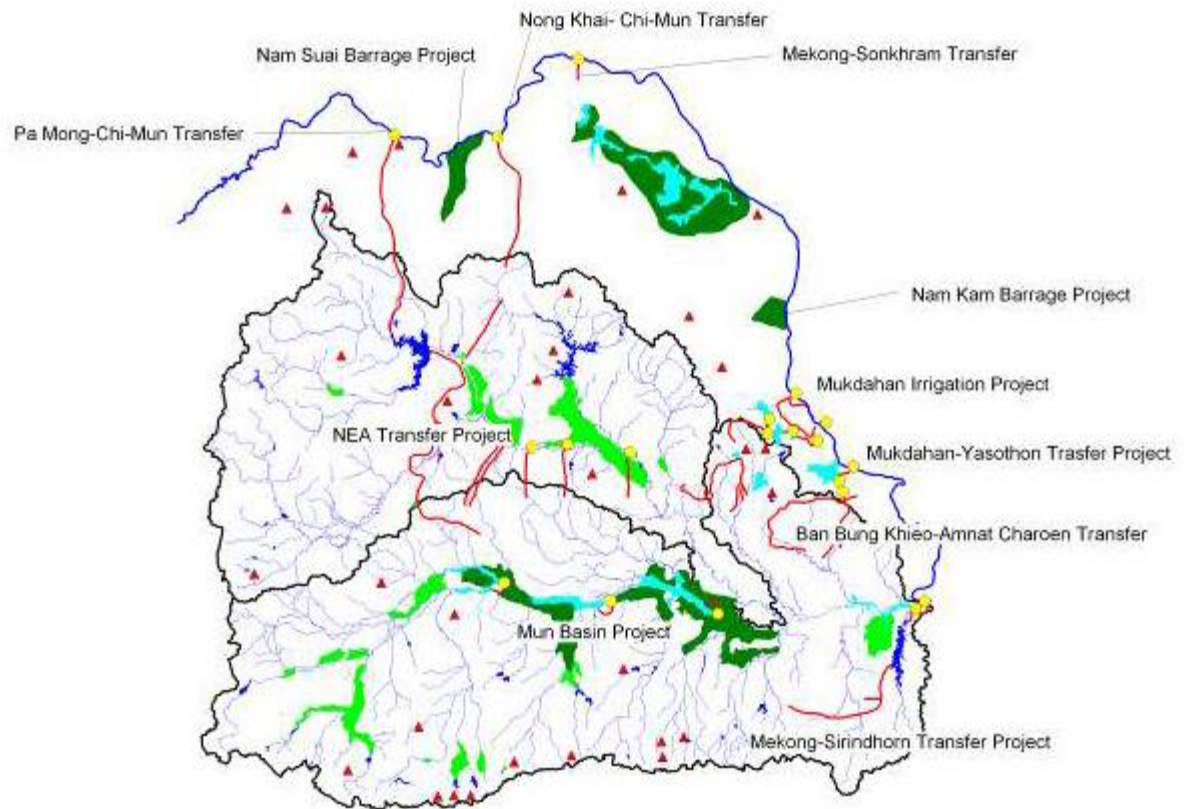


Fig. 7.3 Map illustrating the extent of the Green Isaan Project plans in NE Thailand, illustrating that inter-basin water transfers from the Mekong to the Nam Songkhram Basin was an integral part of the Biwater masterplan (Source: (Floch et al., 2007)).

7.3.6 Budget struggles over control of the Green Isaan Project

From an early stage, it has been noted, there was varying forms of resistance expressed against the project by regional politicians and civil society opposed to the royalist-military strategic group that had assumed a controlling role (partly reflected in the cartoons in Fig 7.2). They objected to the military interfering in matters of internal development that they saw as the rightful business of civilian government agencies and the elected representatives of the people in a democratic country. The politicians perceived that the army was claiming undue credit for projects nominally implemented under the Green Isaan Project banner, but were actually projects that were funded out of the budgets of regular bureaucratic development agencies. One Ubon Ratchatani MP taunted the Prime Minister saying, “it was ridiculous that the

army has to organize concerts in order to get money for the project”¹⁴², which was, “a slap in the face for the Prem government because it simply shows that the government cannot get the necessary money to develop the northeastern region” (The Nation, 1988i). The project was also opposed by Student Federation of Thailand representatives who made an explicit link between state-built dams and associated forced relocation of affected people to infertile resettlement sites leading to a self-perpetuating vicious cycle of poverty (The Nation, 1988r).

At the end of March 1988, following an annual progress review, the NESDB announced that it would take a role in monitoring the project, which according to an anonymous source, was viewed as, “an attempt to curtail the role of the army in the project” (The Nation, 1988m:2). A report a few days later, noted that all activities under the Project would henceforth be overseen by the National Rural Development Board (NRDB), an agency under the Prime Minister’s Office, which according to General Prem, “would speed up rural development programmes” (The Nation, 1988j). This was rather ironic rhetoric, given that the original justification given by the royalists for assigning the project to the RTA was a supposed lack of bureaucracy and efficiency in achieving tasks assigned. However, it seemed to temporarily placate some previous critics who imagined it would boost public confidence in the project by giving elected politicians a greater role. “Now they know who the boss is. The government is supposed to be in the driver’s seat because it has been doing the job from the beginning”, claimed MP Terdpong Boonyarit (Chart Thai Party – Nakhon Ratchasima (ibid). However, the RTA rapidly countered this attack on its legitimacy with a statement by the Army Chief of Staff rejecting the notion that it had failed to competently execute the project plan. General Charuay Wongsayan claimed, “[T]he government is not snatching the Green E-Sarn master plan away from the army as reported by some newspapers. To be exact, everything will go on as before, except that now all government agencies involved will cooperate more closely” (The Nation, 1988g:2).

General Prem lamented that public speculation about the ultimate control of the project was aimed at “driving a wedge between the government and the army to create disunity” (ibid), rather succinctly illustrating a royalist elite view that the

¹⁴² This refers to the Carabao and other pop concerts organized in Bangkok to raise funds for the Green Isaan Project (see Chapter 6, Section 6.6.1).

military and the government were distinct institutional entities, who should rightfully take their lead from the monarchy, rather than parliament as one might expect in a constitutional democracy¹⁴³. A few weeks later Prem made another announcement at a meeting of the Joint Public/Private Consultative Committee that the army was considered just one of several agencies assigned to implement the project and he urged the private sector to help contribute to the project, which was simply, “in response to HM the King’s desire to see the northeastern region develop” (The Nation, 1988k:2), once again trying to use the king’s name as a means to silence critics.

Having been berated by Prem for failing to achieve national unity in his management of the project, General Chavalit returned to the fray with a fresh salvo against his detractors, indicating that he was reluctant to transfer the Green Isaan Project’s control over to the bureaucracy without a struggle first. At a press briefing held within the Second Army Region’s base, Chavalit defended the army’s role in the project, explaining that while the army’s prime duty was to protect the country against external aggression, it also “had committed itself to defending internal peace” (The Nation, 1988d:3). “We are not content with our capability to merely defend the country”, Chavalit continued, “What is the use of sovereignty if many people all over the country are still deprived of their basic needs?” (ibid). He announced that, “a random survey conducted by the army showed that the project greatly benefitted the northeastern people”, and that parts of the region had “become fertile” as a result of the project (ibid.). The next day in Mahasarakham province, Chavalit accompanied by several senior generals, told thousands of villagers he would complete the Green Isaan Project “no matter what happens” (The Nation, 1988f). “The army will continue with the project until it is accomplished. We will fight to the end. We will have more money”, he bullishly proclaimed (ibid).

The following month it appeared that Chavalit may have achieved his wish, as following a meeting of the NRDB chaired by General Prem, the Prime Minister’s

¹⁴³ Prem has long been seen as a leading advocate of this binary division between the executive and legislative arms of the government on one hand, and the superior hierarchical status of the military and monarchy on the other. For example, on July 14 2006, Prem officiated at a graduation ceremony at the Chulachomklao Royal Military Academy and in his speech used an equestrian metaphor to explain the relationship between the monarchy, the government and the army thus, “.....the soldiers belong to His Majesty the King, not to a government. A government is like a jockey. It supervises soldiers, but the real owners are the country and the King”. Two months later the military staged a coup d’etat (Pathamand, 2008).

Secretary-General Sqr Ldr Prasong Soonsiri announced that the Board had decided to seek 55 billion baht (US\$ 2.2 billion) in funding for the Green Isaan Project to be shared by six ministries over five years (The Nation, 1988b). The ministries scheduled to benefit from the funding included Agriculture and Cooperatives, Interior, Public Health, Education, Industry and Commerce, but pointedly did not list the Ministry of Defence. The project was no longer described as a “drought-relief” scheme, but now claimed to be, “aimed at reconditioning the environment, upgrading living standards and boosting incomes”, and developing irrigation was just one of a number of sectoral projects included in the overall rural development programme. On the surface, it appeared the army’s political control and agency was dwindling just as a national general election was looming on 24 July, following eight years of “semi-democracy” (see Connors, 2009) under the Prem government. Significantly, however, before the elections the NRDB “agreed to set up a scrutiny committee, headed by Lt Gen Panya Singhasakda - deputy chief of the Policies and Planning Dept of the Royal Public Relief Centre, to work out the finer details of the projects to suit particular localities” (The Nation, 1988b:3). Theoretically, the NRDB was to coordinate the work ministries at the national level and the Royal Public Relief Centre¹⁴⁴ and provincial development boards would direct the work at the regional and provincial levels respectively. This arrangement effectively re-opened the door for the royalist-military power nexus¹⁴⁵ to retain ultimate control of the project, thereby ensuring the bureaucracy, politicians and civil society would remain subservient to a palace-determined agenda into the foreseeable future.

¹⁴⁴ This obscure agency appeared to temporarily provide a direct link between the bureaucracy and the monarchy through this seminal project scrutiny role that was created for it in the late 1980s, but subsequently disappeared from view or was disbanded, as there does not appear to be a public record of its existence today as far as I can determine from various inquiries.

¹⁴⁵ This nexus is said to incorporate a clique of senior military figures with close connections to the monarchy allied to significant corporate business interests, particularly through its Crown Property Bureau (CPB) investment arm, and key sections of the senior bureaucracy, which benefits financially from the fruits of these state-controlled projects (see Pathmanand, 2008). These actors help make up the conceptual patronage network known as the “network monarchy” (McCargo, 2005), further elaborated in Chapter 10.

7.3.7 Military dictatorship or elected government - the song remains the same

Following the July 1988 general election and appointment of General Chatichai Choonhavan¹⁴⁶ as Prime Minister of a multi-party coalition government, there was a temporary news hiatus surrounding the Green Isaan Project, suggesting it was not a priority scheme. For several months it was unclear who had overall control of the project, but by October it became apparent that the army was still nominally implementing the project, but were forced draw on Ministry of Defence funds to finance it. General Wanchai Ruangtrakul, Deputy Army Commander-in-Chief quickly denied the news story and said that the project was actually being financed by “a government budget and donations from the public” (The Nation, 1988a). In November 1988, it became apparent that the military had never actually relinquished control of the overall project and was still acting as coordinator, after the House budget scrutiny committee proposed an entire restructuring of the project, “to enable the government to effectively monitor the project’s progress” (The Nation, 1988q:2). MP Chamni Sakset (Progressive Party – Nakhon Sri Thammarat) said, “committee members concerns over a possible failure of the project followed reports that the work, particularly the improvement of water sources, has been unsuccessful so far” (ibid). The governance problems concerning a lack of coordination between implementing agencies and duplication of work were once more raised, with army representatives invited to testify before the committee and in return offering a promise “to do better in future”. Two days later, Chavalit was photographed at a meeting with the chief of the World Bank’s mission in Thailand, and admitted that the RTA was considering requesting a loan for 20 billion baht (US\$ 800 million) to finance the Green Isaan Project. He offered assurance that any such request would first have to pass the scrutiny of the NESDB and the Finance Ministry (The Nation, 1988e). The Bank’s representative in Thailand was reported as being “more interested in smaller development projects” (ibid). The last sentence of the same article was particularly revealing about his intentions: “Chavalit has been trying to

¹⁴⁶ General Chatichai came from a powerful military family, but had resigned from the army in 1957 to follow first a diplomatic career and later business interests in textiles and finance from his stronghold in Nakhon Ratchasima. He became a MP in 1975 and was a co-founder of the Chat Thai (Thai Nation) Party, and with his wide experience in business, military and business circles, cultivated a patronage network that was mostly outside the old royalist clique, according to Handley (2006).

solicit support from foreign governments for the Green E-Sarn Project – the success of which is seen as crucial to the army chief's political future" (The Nation, 1988e:2). However, nothing further was heard about the World Bank funding, or the other foreign aid requests, and it is assumed that by this stage foreign lenders were getting rather cautious about Chavalit's reliability.

No doubt smarting somewhat from the rising wave of peasant protests against the industrial tree plantation promotion and forest conservation measures enacted under the Green Isaan Project during the Prem administration (Pye, 2005), the new coalition government gave the impression it wanted to learn from its predecessor's mistakes in enacting a development vision for Isaan, by listening to the populace. For example, both Chavalit and Chatchai joined a seminar in Nakhon Rathchasi titled "The Development Problems in E-Sarn", jointly organized by academics and an NGO coalition body (The Nation, 1988n). It was attended by 300 representatives from villages across sixteen Northeastern provinces. Instead of recounting tales about water scarcity, lack of irrigation infrastructure and drought-induced poverty to the government leaders in accordance with the dominant state narrative, the villagers mostly complained about a lack of land rights, problems with enacting local livelihoods and eviction from national forest reserves. The villagers chiefly blamed local government officials, whom they claimed, "frequently initiated legal action against villagers who continued to cultivate the registered land, adding that many were attacked by state employees when they attempted to file their complaints against the officials" (ibid). The Prime Minister responded to these complaints with an explanation that the government planned to "propose an amendment reducing the area of national forest reserves in the next session of parliament", but in the meantime he suggested that villagers could, "help to maintain forests and cease cutting trees, so that the region is not threatened to such an extent by drought" (The Nation, 1988n:2). Drought once more was restored to its position as a perennial regional enemy.

7.3.8 The monarchy expresses dissatisfaction with project progress

In December 1988, General Chatichai announced that the government would incorporate the Green Isaan Project in the half-completed Sixth National Economic and Social Development Plan (1987-1991), “as it was crucial to Thailand’s future” (The Nation, 1988l:4). In his statement to a meeting of the Association of Thai Executives, he claimed that “a fertile Northeast would bring export-oriented industrialization to the region” (ibid), reiterating the justifications used in the Biwater (1987) masterplan, despite growing local opposition to this development paradigm (Sluiter, 1992). Tellingly, Chatchai failed to provide any timetable for the integration of the Project with the national development plan as earlier recommended by Prem and Sumet, and there seemed to be a growing dissatisfaction in the palace about the slow pace of project implementation and absence of success stories to point to. In a piece of pure Machiavellian theatre, General Chatichai and his wife, Khunying Boonruen, plus the Armed Forces chiefs were invited to a dinner hosted by the king’s 88 year old mother, HRH the Princess Mother at her Chiang Rai hilltop palace¹⁴⁷ (The Nation, 1988o). She is reported to have told the small elite gathering, “I’m longing to see the Northeast green” and requested the Prime Minister, “to ensure that all work is being done to hasten the implementation of the Green E-Sarn Project” (ibid). While General Chatichai responded that the government and the military were “closely cooperating on the project” he humbly expressed doubt about his ability in his job, stating, “I think I’m still not good enough” (ibid). This remarkable public dressing down of the elected Prime Minister could only be interpreted to mean one thing – the king was seriously concerned about the fate of his brainchild since the departure of Prem - but had to be careful not to be publically seen directly interfering in government affairs so as at least to maintain a pretence that his position remained “above politics”.

This royal interference concerning the faltering progress of the Green Isaan Project, failed in the event to stop a growing groundswell of opposition to the project emerging from various quarters, especially villagers adversely impacted by the

¹⁴⁷ According to Handley (2006), Doi Tung Palace was built by the army for the king’s mother and required the appropriation of 37,000 acres of land from hill tribe villagers who lacked land title and citizenship, and was subsequently turned into a farming operation and tourist attraction, with the evicted ethnic minorities employed in the manner of “an old feudal estate”.

forestry programme (see Pye, 2005). At the end of 1988, whilst receiving traditional New Year's well-wishers from amongst his patronage base in Nakhon Ratchasima, General Chatichai confirmed that the government would continue undaunted with the Green Isaan Project "despite criticism that it would definitely flop" (The Nation, 1988p:2). He reassured army officers, provincial officials and villagers and stressed that the military would continue to take a leading role in project implementation, claiming, "[T]o turn the Northeast green is not impossible as many people said. It is highly possible" (ibid).

As the 1989 dry season came around, the RTA resorted to its familiar tactic of declaring a drought crisis said to "be killing large areas of crops" and "rushing" a fleet of water trucks out to the Northeast from military bases to "help farmers" (The Nation, 1989d). This time, however, the news coverage was notably more muted than in previous years, suggesting a degree of media ennui to the annual military drought relief roadshow mission had set in. A couple of weeks earlier it had been announced by General Wanchai Ruangtrakul¹⁴⁸ that a 4.8 billion baht (US\$ 192 million) budget had been requested for the coming financial year to implement reforestation and irrigation system development work (The Nation, 1989g). The same article noted that "twenty seven government and foreign agencies are involved in carrying out the development programme this year", which was to be concentrated in eleven provinces considered most drought-impacted. As the year progressed, it became gradually more apparent that the army's control over the project was withering under the Chatichai regime¹⁴⁹, and as Handley (2006:329) notes, "[P]oliticians and the civilian government were going to take credit for development", which piqued the traditional royal-military elite. While the 13 volume Biwater (1987) Green Isaan masterplan for "comprehensive" regional development was already gathering dust in the NESDB, its ethos and embedded irrigational developmentalism lived on as Northeastern MPs who had criticized Green Isaan were hatching their own rival grandiose scheme that would surpass its forerunner in scope and cost.

¹⁴⁸ Who was now Deputy Commander-in-Chief of the armed forces and still apparently remained coordinator of the Green Isaan Project

¹⁴⁹ Chatichai's most famous slogan was to "turn battlefields into marketplaces", signifying the end of military involvement in the Indochina region, supposedly heralding a new era of neo-liberal regionalization and democratization.

The Chatichai administration enacted the novel idea of holding “mobile Cabinet meetings” in major provincial cities, as a show of decentralization. The first meeting was held in Hat Yai in the South, while the second was scheduled for Khon Kaen in the heart of the Northeast on April 8, 1989 (Suksamrarn, 1989:8). This meeting gave the chance to Northeastern MPs from all major parties and factions to offer their development visions (or “pet projects”, in the words of *The Nation* reporter) to the Cabinet for consideration (ibid.). The three main coalition parties with the largest MP voting bloc in the Northeast¹⁵⁰, were in the strongest position to push their favoured development projects for government funding. The SAP proposed a populist programme of land reallocation for landless farmers, while the Chat Thai plan concentrated on industrial development in key regional centres. The Democrats, however, lobbied the government with a proposal to build a large-scale water diversion project from the Mekong River for irrigation purposes in provinces along the border with Laos, estimated to cost 1.8 billion baht (US\$ 72 million) (Suksamrarn, 1989). The politician pushing most strongly for this project was Udon Thani MP, Prachuab Chaikasarn, deputy party leader of the Democrats and successful regional businessman (see Chapter 6, Section 6.6.2).

Buoyed by a more liberal political climate, civil society groups linked to certain political-business factions also began to forward proposals for regional and provincial level development, which increased a sense of competition with the Green Isaan Project’s royalist-military group’s agenda. For example, a coalition of MPs, community leaders, academics and representatives of provincial chambers of commerce from seven lower Northeast provinces held a seminar in Ubon Ratchatani Province to decide on a common development agenda prior to the mobile Cabinet meeting in Khon Kaen (*The Nation*, 1989b). The delegates agreed that, “as the first priority, the government provide sufficient water for drought-hit Northeastern provinces by digging more irrigation canals and drawing water from natural sources” (ibid). Superficially, this seemed like a straightforward request for continuation of one of the fundamental pillars of the Green Isaan Project. It differed though in one major respect – the proposed scale of intervention. Whereas the Green Isaan Project’s strategy had popularly been perceived as prioritizing widely dispersed,

¹⁵⁰ The Chat Thai party had 30 MPs, the Democrat Party had 16 MPs and the SAP had 29 MPs elected in the Northeast

village-level, mostly domestic water resources development projects, at the expense of large-scale projects to provide universal water supply across the region, this new project sought to overturn the small-scale focus image¹⁵¹. Following the regional Cabinet meeting, a resolution was passed to invest 20 billion baht (US\$ 800 million) in four major projects to divert water from four Northeast rivers, including the Mekong. Seemingly pouring scorn on the Green Isaan Project, an editorial stated, “[D]rawing water from the rivers is certainly more reliable than waiting for the rain, which when it does come to the Northeast, is never enough to turn the region into a green belt” (The Nation, 1989h:8). Even respected human rights lawyer and civil society advocate, Thongbai Thongpao, appeared to support the new regime’s large-scale development proposals, writing in a column in the conservative Siam Rath newspaper:

“E-sarn doesn't need the annual mobilization of water-trucks to distribute water in drought-stricken areas. What E-sarn needs are dams to divert water from the four rivers for irrigation. Don't waste time on making earthen jars or digging wells or reservoirs because they are useless when there is no water to keep” Source: (The Nation, 1989f)

Thus, the key dominant narrative of undertaking a transformational “greening” of the “underdeveloped and drought-stricken region” into an irrigated utopia, based on comprehensive hydraulic development is shown to be a discourse that crossed state and non-state actor boundaries, and was adopted as readily by actor groups in civil society, pointing to the dominance of irrigational ideology in Thai society.

7.4 Green Isaan Project’s political demise and replacement

Despite the growing loss of confidence in the royalist-military clique’s legitimacy, this group persevered with their plans seemingly oblivious to the widespread criticism, local protests, change of government and bureaucratic non-cooperation. In May 1989, General Wanchai Ruengtrakul boldly declared that the project should be extended for a further five years, given that the scheme “had been successful in

¹⁵¹ This image was actually misplaced, as the Biwater (1987) masterplan illustrated (Fig. 7.3), but the Prem government never managed to communicate this plan to the public as it had been so wrapped up in political intrigue and opaque backroom deals.

easing the hardships facing the local people” (The Nation, 1989i). He stated, “[A]nother achievement of the project is growing faith and confidence among the local people in the government and the military”; and emphasized, “several countries, mainly the United States and China, have sent equipment and experts to help support the project” and that, “many other foreign countries have expressed interest in making contributions to the project.....among them are West Germany, Australia, Israel and Japan” (ibid). It is noteworthy that few public records appear to confirm any of these nations’ contributions, bar perhaps the earlier tentative interest from Israel and UK, plus a donation of an \$80,000 pump from a Florida based company called M & W Pump Corporation, that was reported to have close links to the incumbent Republican Party (The Nation, 1989a:15). The President and CEO of M & W, David Eller, claimed at a press conference to officially hand over the pump to the Thai government, “the ‘Greening of the Northeast’ is one of the largest and most important water development projects in the world today” (ibid).

As 1989 progressed, Green Isaan Project media references dwindled and if it was mentioned at all, it would mostly be by an army spokesman attempting to re-inject a semblance of credibility into the ailing programme. For instance, Lt Gen Issarapong Noonpakdi¹⁵² spuriously claimed in an interview that the project was a success on the whole and under the project, “all villagers in the Northeast now have access to clean drinking water” (Kalthisa, 1989). In a sign of just how far the project’s direction had deviated from its original goal of alleviating local domestic and agricultural water scarcity and “greening” the landscape, General Wanchai announced that the RTA had decided to seek “a major role” for the Tourism Authority of Thailand (TAT) in the Green Isaan Project and would “allocate Bt 163 million for northeastern tourism promotion” (The Nation, 1989e:2). In one final bid to retain a shred of public legitimacy, in October 1989, Lt Gen Issarapong, whom by then had been promoted to Deputy Army Commander-in-Chief, told the press, “(T)he army will step up efforts to achieve the goal of turning the barren Northeast into a fertile region under the Green E-Sarn development project by the end of 1992” (The Nation, 1989c:3). He expressed confidence that in the nine driest provinces the

¹⁵² Issarapong Noonpakdi was a key member of the so-called Class 5 royalist-military clique that toppled the Chatichai government in a 1991 coup d’etat under the name the “National Peace-Keeping Committee” and played a pivotal role in the 1992 suppression of pro-democracy protesters calling for the withdrawal from politics of the military junta.

army had identified, “the chronic drought situation there should be fundamentally eradicated.....About 70-80 per cent of the budget for the Green Isaan scheme has been earmarked for reafforestation, soil quality improvement and water resource development, while the rest would be spent to create jobs for villagers and to improve their quality of life” (ibid.).

In the event, after October 1989 the Green Isaan Project was scarcely heard of again in the media and appeared to be quietly dissolved by the government, presumably to minimize embarrassment for the sake of its powerful patrons and designer. Besides, by this time the discursive justifications and goals of the project had already been incorporated into the “Khong-Chi-Mun Project” under a rival strategic group of political-business interests, as the new panacea to Isaan’s problems, thereby making it counter-productive to criticize the Green Isaan Project too harshly. In any case, all major groups seemed to be behind the irrigational aspects of both projects and it was the forestry and land rights aspects that were more contentious in society. Thus, after three years of fairly sustained promotion through a wide variety of media of the utopian promise of greening the Northeast through a universal irrigation development paradigm, the old discourses supporting developmentalism and irrigationalism around since the days of Sarit had been more firmly entrenched in the hearts and minds of the rural electorate, perhaps even more strongly now that it was elected politicians promising the vision, as well as unaccountable bureaucrats and military men. Interestingly, even in 2010 I could still encounter villagers in the Northeast who would nostalgically talk about Chavalit and regretted his inability to create the Green Isaan nirvana, often blaming other “selfish” politicians.

Table 7.1 below offers a brief summary of the evolution of the Green Isaan Project from its original conception as a geographically limited project to its final mention in the newspaper reports reviewed, giving an indication of the project’s spatial ambitions, proposed implementation budget, the main coordinating agency responsible and narrative objectives. It should be noted that narrative justifications given were quite fungible depending on the narrator’s underlying vested interests, although the overall dominant development paradigm of fundamentally transforming the Northeast into a green, fertile, prosperous and irrigation-based agrarian utopia remained a discursive constant throughout and irrespective of the actor.

Time point	Scale of project	Planned Budget (Baht)	Main coordinating agency	Main narrative justification
Public launch – March 1987	Limited areas in four “drought-stricken” provinces of Nakhon Ratchasima, Khon Kaen, Roi-Et and Mahasarakham	300 million from RTA	Royal Thai Army (RTA)	Relieving drought-hit villages and supplying water through short term and long term measures
Middle - July 1988 (pre-general election)	Entire NE Thailand (all 17 provinces)	55 billion (c. US\$ 2.2 billion) from multiple sources, including state budget, donations and foreign aid or loans	National Rural Development Board (NRDB) under the Prime Minister’s Office, with NESDB oversight	Turn the NE into a “green belt” and fertile region, by “reconditioning the environment, upgrading living standards and boosting incomes”.
End – October 1989	All NE Thailand, but focusing on 9 of driest provinces	Not specified, as funding gradually withdrawn by coalition government. In November 1988, Chavalit had reportedly been negotiating a loan with the World Bank of 20 billion baht for the project.	RTA	Turn the “barren” NE into a fertile area by reforestation, soil quality improvement and water resources development. Eradicating drought and tourism promotion?!

Table 7.1. Summary of the Green Isaan Project’s claimed scalar intervention, budgetary plans, main coordinating agency, and main justification narrative evolution at the beginning, middle and end of the scheme.

7.5 Included and excluded voices

When considered solely on the basis of the English language newspaper articles which may or may not have reflected the coverage of Thai language newspapers and other media, it is apparent that only a relatively narrow range of actors’ voices were ever presented regarding the Green Isaan Project. From the beginning of the project, the best represented voices were those of a handful of senior military leaders, the Prime Minister and elite bureaucrats. This bias speaks to power relations and in

particular, who is allowed to speak and who is silenced in the development process. The actor who perhaps became most synonymous with the Green Isaan Project was General Chavalit Yongchaiyudh, who clearly used the scheme as a vehicle to further his career, both in and later, out of the military. His authority seemed to stem to from his claim that the king had privately expressed a desire to him at the 25 March 1987 funeral see the problems of the “drought-stricken” Northeast’s problems banished and had handpicked Chavalit to be the frontman to carry out the royally-entrusted goal. From that moment on he publically constructed it as a “do or die” mission for him and the military, while simultaneously deliberately working towards a post-military career as a national politician, believing in the potential of the Green Isaan Project brandname as a rural vote winner.

Phatharathananuth (2006) suggests that Chavalit had long harboured a burning ambition to become prime minister at some point. Always a consummate political opportunist, and able to draw on a wide network of contacts he had built up during years spent in counter-insurgency and military intelligence operations, Chavalit sought to co-opt a range of parties (including ex-CPT members and grassroots farmers groups) in the Northeast to his own cause and vision of greening of Isaan, almost identical in content with that of the king and Bangkok-based elite. General Chavalit took retirement from the military in October 1990 and almost immediately formed and led the New Aspiration Party (NAP), which became a political force in the Northeast for many years¹⁵³, relying heavily on a rhetorical tactic of turning the Northeast green though eradicating drought and poverty¹⁵⁴. He campaigned by building an image of himself amongst the rural populace as a “champion of Isaan”, ready to make the region “prosperous”, argues Phatharathananuth (2006). His rather unconventional style of leadership in the military and politics occasionally left him open to criticism about his motives and some questions surfaced now and again

¹⁵³ Although born in Nonthaburi near Bangkok to a military family, Chavalit claimed his political base in Nakhon Phanom Province after many years spent based in the Northeast working in signals and intelligence, as the RTA’s chief “architect of political strategy against communism” (Baker and Phongpaichit, 2005).

¹⁵⁴ Chavalit regularly called upon a positive collective memory of the Green Isaan Project as an effective campaigning tool in the Northeast as a way to drum up support for the NAP, which demonstrates that local opposition was relatively isolated. Indeed, many villagers I have met fondly remember “Big Jiew’s” (his popular nickname) election promises to resurrect the Green Isaan Project and rued the fact he was never able to turn them into reality. While taking cabinet posts in various coalition governments, he did eventually become Prime Minister for a year between November 1996 to November 1997, a period that coincided with the Asian Economic Crash, and a rapid decline in his political fortunes.

about his loyalty to the throne¹⁵⁵. However, (McCargo, 1997) argues that the NAP was a major vote buyer at the 1995 elections and relied on traditional Thai political techniques involving “*amnat*” and “*ittiphon*” (power and influence) to win seats in parliament, suggesting vision alone was not enough. In his political heartland of Nakhon Phanom, he was recognized as a godfather (*jao pho*) of lesser provincial and district *jao pho*, controlling cross-border trade with Laos, illegal logging, a brokerage role for lucrative state construction projects and oversaw a network of local politicians extending down to the village level (personal observations, 2004-07).

Appearing slightly less prominently in the media as a staunch defender of the Green Isaan Project was Prime Minister, General Prem, known as the king’s handpicked proxy and close confidante (Baker and Phongpaichit, 2005; McCargo, 2005; Handley, 2006). His role was one of a frontline, “hands-on” approach during the initial April 1987 “disaster relief” phase, where he was seen alongside military and civilian personnel, paternally overseeing the distribution of domestic water to villagers, prominently displayed as a gift from the king (Bangkok Post, 1987g). Later on, as criticism arose from politicians within parliament, he took a less prominent role and appeared more concerned with managing the public image of the project to ensure minimal negative fall-out for the monarchical institution arising from the slow progress in implementation; internal discord between the military, state agencies and politicians; and the growing grassroots and civil society opposition to the project. For example, when the RTA appeared to be receiving political flak within parliament for mishandling the coordination of the project amidst allegations of corruption, Prem recommended that two hitherto obscure agencies (the NRDB and Royal Public Relief Centre) under the Prime Minister’s Office be brought in to coordinate the project nationally and locally respectively (The Nation, 1988b). This move appeared to be a smokescreen for placing the project more directly under the control of the royalist-military Bangkok-based inner circle, and away from the hands of Chavalit’s military clique. This institutional meddling by Prem proved unacceptable to Northeast politicians, who disliked the interference of the military in what they considered, as legitimate representatives of the populace, a development

¹⁵⁵ While General Chavalit partly owed his rise to Supreme Commander of the military to the patronage of General Prem, later he became more of a liability to the royalist elite, and was occasionally tainted as a “communist sympathiser” and “republican” by his political enemies, after his attempts to form a “Revolutionary Council” with ex-Communist Party of Thailand members backfired (Kevin Hewison, personal communication, January 2012).

task to be undertaken by themselves. Their disdain of the Bangkok-based royalist elite was made apparent following the July 1988 electoral defeat of Prem and his replacement by General Chatichai, who drew his core support from a more Isaan-centric group of MPs who had competitive political and business interests.

Chatchai's rise to power opened up an opportunity for a rival project (KCM) to be hatched and compete with the Green Isaan Project for funding, albeit based on an identical ideology and set of narrative justifications.

Another staunchly royalist establishment figure prominent in supporting the Green Isaan Project throughout was Sumet Tantivejakul (see Footnote 129), an economist who ran the Royal Projects Development Board (RPDB) from within the powerful NESDB. According to Handley (2006), Sumet had spent time in Vietnam studying the links between rural discontent and insurgency, prior to working in the government's planning bureau division that dealt with natural disasters and war. He is cited in Handley (2006:290) as referring to the RPDB as, "an integrated service for His Majesty the King and Royal Family", and it was used as a vehicle to bypass normal bureaucratic procedures, profligacy and tardiness to expedite rural development projects where they were needed. Under Prem's stamp of authority and Sumet's guidance, government spending on royal projects increased tenfold after the RPDB was established, building six royal development centres around the country to practically demonstrate the king's ideas and theories, including small-scale water diversion, flood control and water storage projects for irrigation and hydropower. Dr Sumet, in keeping with other conservative monarchists, seemed to possess an ideological worldview supporting the pre-ordained nature of Thai hierarchical society under the guidance of a semi-divine monarchy protected by the military, and his comments concerning the Green Isaan Project should be considered in this light. For example, when politicians questioned the involvement of the military in implementing the project, Sumet was reported to have viewed the role of the army as "a positive factor" which would accelerate the development process (The Nation, 1987k:2). He reportedly said, "[S]ome skeptics see it as a political move. But I think we have to be objective and broadminded to appreciate what the army is trying to do" (ibid.). Sumet stepped forward on several subsequent occasions to defend the project against criticism, especially from politicians claiming it duplicated regular development programmes already underway. Sumet denied this charge and said the

Green Isaan Project complemented the National Economic and Social Development Plan, describing it as a master plan towards “the complete and total operation plan for systematic economic and social development of the Northeast” (The Nation, 7 November 1987). This statement illustrated how far the project had moved from its limited drought-relief roots in four provinces, to a totalizing scheme of state-led regional control, as conceived by a minute elite group.

Other voices elevated in the media reports in occasional support of the project were drawn from a mix of regional and national politicians, private business and corporate interests, multi-lateral aid donors and lenders (e.g. a member of the World Bank mission), international consultants (e.g. Biwater representatives), a few senior national technocrats (e.g. Mechai Viravaidya), and a handful of representatives from mainstream civil society groups and academia. The businessmen interviewed seemed to seek media publicity gained from donating gifts (cash and products, such as pumps) to the Prem government, no doubt aware of the ideological source of the project. While the industrial forestry and commercial plantations aspects of the project were implemented on a large scale, giving opportunities for private interests to profit, by comparison water resources development projects were mostly rather localised and dispersed, with much of the groundworks being handled by the RTA operators, undoubtedly to the chagrin of Northeastern construction contractors originally anticipating a dam-building bonanza under the Green Isaan scheme. This could be another plausible explanation for the low enthusiasm shown by many Northeastern politicians with close personal connections to construction and earth-moving businesses that had anticipated state-awarded contracts from this project. Witnessing army machinery constructing water resources development projects equated to a loss of income for the private sector, but just as crucially, it reduced rent seeking opportunities for politicians and bureaucrats. Furthermore it reduced the traditional opportunity for politicians to secure votes through promising water resources development projects political patronage networks and the later payback from awarding contracts; a factor General Chavalit would surely have been acutely aware of when planning his future political career. In other words, viewed retrospectively, it was hardly surprising that the royalist-military group received such poor cooperation from strategic groups that allied politicians, construction entrepreneurs, chambers of commerce and certain key bureaucratic line agencies. No

matter how hard the royalist-military elite attempted to capture the hearts and minds of the local populace by piecemeal digging of wells, weirs and small reservoirs, or making paternalistic public shows of water handouts to a few villages each dry season; they could not compete with the increasingly powerful patronage networks of the new regional politician-business elites, who recognized that the KCM offered them far better prospects for enrichment and legitimacy.

By contrast, some voices were almost entirely absent from the media's public transcript throughout the entire Green Isaan Project debacle, especially the supposed recipients of the project the Northeast. These were supposedly the subjects of the development discourse; the villagers presented as in need of state assistance to overcome water scarcity, bio-physical adversity and grinding poverty. As far as I can discern from my examination of 64 news articles, there was not a single direct quote or comment garnered from a local actor concerning the Green Isaan Project. The only people interviewed, were relatively powerful members of society, whether in support or opposition to the project. Sub-alterns were notable by their absence, only appearing as passive recipients of royally gifted water doled out from army trucks by soldiers and state officials. This may be as much a reflection about contemporary journalistic style in Thailand as it was about the top-down and autocratic nature of the scheme's planning and implementation. Garden and Nance (2007) highlight the Mekong regional media's tendency to "speak for", rather than "listen to" those groups at the margin, in privileging state narratives of water resources governance over alternatives. Local people were seemingly regarded as mere passive recipients of paternalistic state and donor-provided development largesse by the bureaucrats, military leaders, business executives and foreign aid agency officials, reflected in the interviews, photographs and reporting style of the mainstream media. Even when there was a report of forced evictions of villagers from National Reserved Forest in Buriram and a subsequent violent protest (The Nation, 17 March 1988), no local person was quoted directly about their views as to why they took this action¹⁵⁶. All actors were effectively portrayed as acquiescing to the dominant problem framing for the region, but only disagreed about who should legitimately lead the fight

¹⁵⁶ This may alternatively be interpreted as a desire by journalists to protect local people from subsequent recriminations by state authorities, as there is a history of village leaders and spokespersons being directly intimidated or subject to violence, when they have spoken out directly to the media about harmful development projects. Hence, anonymity is assumed to be the safest and option for the least powerful societal groups.

against drought and some of the methods. The main area of contention between dominant actors was over who controlled the budget and the institutional framework for implementation; rather than a debate over the utility and accuracy of the dominant problem and solution narrative framing itself. However, this situation was perhaps of little surprise given the intellectual origins of the regional water scarcity and “greening” narrative and dominant ideology of water being a “royal gift”, rather than a right.

7.6 Summary

The Green Isaan Project may be perceived as just one key instalment in a series of near clone-like regional development mega-project plans, that stretch unbroken across a chronological period spanning over half a century, that point to a state-centric hydraulic mission. This remarkable historical continuity suggests a state constantly concerned with supply-side, control-oriented, utopian solutions to manufactured problem framing of the Northeast (with water scarcity the key justificatory narrative). This challenges the notion of distinct evolutionary stages of an irrigation development paradigm in Southeast Asia proposed by Barker and Molle (2004), whereby the pathway suggests a gradual shift to demand-driven, farmer-oriented and decentralized strategies for public irrigation models post-1990 (classified as “the era of globalization”). Instead, what can be empirically drawn from the case of Northeast Thailand is that each state mega-project is closely predicated on the meta-justifications, ideology and design of its predecessor, which points to a combination of characteristics more closely matching Barker and Molle’s (2004) Colonial Era and Cold War era categories. What mainly differentiates each mega-project proposed by the state are the primary actors that strategically cluster around and promote their “pet project”, rather than an evolving discourse, which is essentially static. The actor alliances involved in the case of the Green Isaan Project were seen to be a strategic grouping of monarchical, military, bureaucratic, political and business interests. The integral involvement of the military and the monarchy elite groups differentiated it somewhat from subsequent schemes, where Northeast regional politicians that had been excluded from Green Isaan took on leading roles

and were able to more successively sell the projects to their local constituencies through political networks.

Such networks point to a more complex pattern of power distribution in late twentieth century hydraulic societies than a simple state-village binary understanding would allow, although Wittfogel recognized that competition between competing factions was a characteristic of hydraulic societies. Interestingly, some of the key actors to emerge from media reports promoting the utopian project were all close proxies and allies of the king, embedded within a monarchical network (cf. McCargo, 2005). Indeed, interpretation of the public transcripts suggests that in the early stages of project formulation, the dominant force behind the project was the king himself, personally instrumental in providing the narrative justifications, problem framing and deterministic solution setting agenda, subsequently enthusiastically adopted by other elite actors in rival projects. Moreover, interpretation of the news reports indicated that a number of hidden agendas and subtexts were at play, that went beyond simple national security narratives concerning project motives. The most egregious subtext revealed by the research was the apparent Machiavellian web of links between the state's public desire to construct the Green Isaan Project and a secret arms for development aid deal enacted between the Prem Tinsulanonda and Thatcher governments, that bears all the hallmarks of the better documented and contemporaneous Pergau Dam scandal, but escaped the bad publicity (The Nation, 1994; World Development Movement, 1995). This, perhaps more than any other individual issue raised in the course of this research, demonstrates that water resources development, state ideology, elite power, knowledge constructions and financial corruption are frequently intertwined bedfellows.

Chapter 8 Competing development narratives and conflict at the river basin level – multi-scalar cases in the Nam Songkhram Basin

8.1 Introduction

The previous chapter examined in detail the case of just one of six pan-regional development projects that have been proposed (and in some cases, partially implemented) in the Northeast over the past half century. It examined some of the principal political actors, their narratives and political strategies used to support or oppose the Green Isaan Project, which ultimately was abandoned. It demonstrated how this utopian project, with a strong hydraulic development component, was closely aligned with a group comprising of military and royalist figures, whom strongly depended on the narrative problem framing and symbolic support extended by the king for its initial legitimacy. Ultimately, however, the project experienced opposition from a broad range of regional political actors and actor alliances, including national politicians and their regional patronage networks struggling for control over the budget with military factions and secondly, civil society and grassroots groups opposing the project on the basis of environmental and social justice concerns. Sometimes operating synergistically, the oppositional groups managed to block full-scale implementation of the project during the latter period of the Prem royalist regime, using a variety of discursive tactics and on the ground resistance and violent struggle against state forces (Pye, 2005). However, as soon as Prem was ousted from power, a different elite strategic group (under the patronage of General Chatichai Choonavan) proposed a rival hydraulic development scheme under the “Khong-Chi-Mun Project” rubric. This scheme adopted almost identical discursive justifications for large-scale basin water transfers and universal irrigation coverage as its predecessor, eventually leading to renewed opposition and conflict over development pathways (Sneddon, 2003b).

Based on the earlier contention that universalized and naturalized narrative justifications around resource scarcity and poverty are routinely employed by dominant groups for the production of blueprint irrigational solutions are a recursive regional phenomenon, this chapter will direct the analytical lens to the Nam Songkhram river basin level. It takes as a starting point a view that the Nam Songkhram Basin can be seen as a political arena of periodically intense conflict and struggles between strategic groups or actor coalitions over the course of many decades, that involves complex intersecting local, regional and national interests (Blake et al., 2009). This chapter will explore aspects of the irrigation development discourses, politics and practices from a small sample of projects, ranging in scale from the macro to the micro, encountered during the course of fieldwork as interesting “cases”. It will attempt to identify some key actors and strategic groups associated with promoting or opposing these projects and the main narratives utilized, while examining some of the micro-politics of each case. The data is derived from a mix of empirical fieldwork findings (e.g. interviews and direct observation) and analysis of secondary sources. This chapter attempts to address the following research questions:

SQ3 Which actors appear to determine control and access to water resources at multiple scales, using what discourses and pathways?

SQ4 What are the important power relations mechanisms at work across various scales, such as “discourse coalitions” or “strategic groups”?

8.2 Case Studies of Basin Hydraulic Development

This section examines a sub-set of four empirical case studies that ground the Nam Songkhram Basin case in a historical setting and highlights a long history of political contestation between actors and interest groups. The first two large-scale irrigation projects considered (the Lam Nam Oon Irrigation Project and the Nam Songkhram Project) were already broadly familiar to the author during previous work in the basin (e.g. Blake and Pitakthepsombut, 2006a, b; Blake et al., 2009), while the two small-scale projects (Nong Saeng and Huay Wang Rua) were revealed as interesting

cases during the course of fieldwork, and I believe do not represent uncommon or exceptional cases of irrigation development. The relative locations of the four projects are shown in Fig. 8.1.



Fig 8.1 Locations of case study irrigation development projects referred to in Chapter 8

8.3 The Lam Nam Oon Irrigation Project

8.3.1 Roots of project in regional ideological struggles

The Lam Nam Oon Irrigation Project (LNOIP) nominally arose out of regional water resources development plans hatched in the offices of the Bangkok-based Mekong Committee during the 1950s, as part of the proto-hydraulic mission for the Northeast. The area where the project is located, in the shadows of the Phu Phan hill range in Sakon Nakhon Province, has a history of local resistance against both Central Thai state and foreign domination (Baker and Phongpaichit, 2005) that pre-dated LNOIP, but had significance to later events. During the Second World War, the Phu Phan hills were a nexus of armed resistance against the imperial Japanese Army by the *Seri Thai* (Free Thai) Movement. Some of the *Seri Thai* fighters emerged as post-war left-wing political leaders committed to educating the peasants, raising political

consciousness, promoting collective action and building “progressive, anti-Bangkok dictatorial government networks”, notes Phatharathananunth (2006:41). The most notable amongst these leaders was Tiang Sirikhan (known as the “General of Phu Phan”) and later following his death, Sakon Nakhon-born school teacher, Khrong Chandawong. Khrong founded the *Sammakkhitham* (Solidarity) Movement which reportedly attracted thousands of members and would have posed a threat to the hegemony of the Bangkok government over the Northeast as it grew into a strong peasant-based organization. Khrong was repeatedly arrested and spent five years in detention on charges of separatism, being a traitor and communist instigator under the dictatorial Phibun Songkhram regime in the 1950s.

Khrong’s release during the subsequent Sarit Thanarat regime failed to stifle his political activities in the upper Northeast and along with a colleague, was re-arrested and summarily executed on 31 May, 1961, by a police firing squad in a Sakon Nakhon paddy field¹⁵⁷ near his home under the direct orders of Sarit (Baker and Phongpaichit, 2005). In a letter to the king, Sarit justified his actions by claiming the pair were attempting to separate the Northeast from the Thai nation and unite it with Laos, and thus posed a threat to “national security and the Throne”¹⁵⁸, according to Chaloeontiarana (2007). Following his execution, there was a period of brutal persecution by state security forces against members of the *Samakkhitham* Movement, who were forced to go underground and eventually went on to form “the backbone” of the Communist Party of Thailand (CPT) in the upper Northeast, which was recognized as the “strongest base” nationally during the early period of revolutionary struggle (Phatharathananunth, 2006). Indeed, armed hostilities between the CPT and the Thai state officially broke out not far away in Nakhon Phanom province in August 1965 and the following year a well known young historian and

¹⁵⁷ In August 2010, I visited the site of the execution in Sawang Daendin District, Sakon Nakhon, in the company of Khrong’s son, Khun Vithit Chandawong.

¹⁵⁸ According to Thai historian, Somsak Jeamteerasakul, Sarit alleged in a letter written a day after the execution to justify his decision to King Bhumibol, that Khrong had personally attacked the king and queen. The allegations were such that Somsak felt the need to self-censor the reproduced letter in his posting to a discussion board on Thai politics. Source: <http://asiapacific.anu.edu.au/newmandala/2011/05/20/khrong-chandawong-remembered/> Accessed 12 January 2012.

poet named Jit Phumisak¹⁵⁹ who had joined the CPT was shot dead by a state agent in the Phu Phan hills, just to the west of the LNOIP dam site.

The purpose of this historical preamble on political struggles is to stress the strategic importance of this particular part of the Northeast to national and regional security concerns of both the Thai state and the US government. The Phu Phan hill range, quite isolated, clad in thick forest and with rugged terrain, figured prominently in Cold War narratives concerning ideological and military supremacy for the “free nations” and the dangers of communism spread in mainland Southeast Asia (Keyes, 1967; Stevenson, 2001). There was clearly a growing sense of unrest and dissatisfaction amongst local people about Bangkok’s rule and perceived injustices and persecution by state forces, which combined with the general state of economic under-development compared to Central Thailand would have fed into a growing sympathy for the CPT that concerned the US government, which was pouring ever greater sums of money into winning over the “hearts and minds” of Northerners to the ideological causes of development, modernity and capitalism, alongside its military programme. It is against this background that an irrigation project was proposed in Sakon Nakhon as part of the Northeast Development Plan (1962-66) initiated under Sarit Thanarat’s regime (see Chapter 4, Section 4.3.5) and submitted to the US government for funding assistance.

8.3.2 Construction during insurgency

An initial feasibility study for the project was submitted by the Royal Irrigation Department (RID) to the United States Operations Mission (USOM) in November 1963, with the report stating that a “substantial irrigation development plan” had been requested from “farmers’ representatives”, who had “to live in the constant fear that a drought or flood may arise to demolish their crops” (Royal Irrigation Department, 1966:2). After review, the RID submitted a revised feasibility report in

¹⁵⁹ Jit Phumisak is best known for his book “*Chomna sakdina Thai*” (The Face of Thai Feudalism), written in 1957 under a pseudonym. Ironically, in 1953 he had been hired by the US Embassy in Bangkok to translate the Communist Manifesto from English into Thai. After becoming disillusioned with mainstream Thai politics he joined the outlawed CPT in the Phu Phan hills, but did not take up arms. (Source: Wikipedia webpage: http://en.wikipedia.org/wiki/Chit_Phumisak Accessed 10 April 2012)

July 1966, which was subsequently accepted for loan approval by USAID (Wildman, 1970). The planning process coincided with an escalation in political violence in the Northeast and the increased militarization of the region by US and Thai forces, with major airforce and military bases being established not far away in Nakhon Phanom and Udon Thani to prosecute the Indochina War (Baker and Phongpaichit, 2005)

The LNOIP was built between 1967-73 at an approximate cost of \$72 million, with USAID offering a 25 year low interest loan of \$3.5 million to the Thai government for purchase American machinery and technical assistance. A USAID progress report provided some illuminating context to the project's underlying motivation and urgency:

“[T]his project has been high on the priority list projects for development of the water resources of Thailand.....Added impetus was given to this project by the interest of the US and RTG in counter-insurgency measures. The project area was considered the second most active insurgent area in Thailand, at the time the loan was made.”

Source: Wildman (1970:1)

The same report further stressed the benefits that an irrigation project with its associated infrastructure would bring to improved accessibility, surveillance and security functions for state forces in bringing the local populace under its control:

“[T]he provision for access roads to the dam site, and roadways provided by the canal berms, will provide increased mobility for security forces in the project area, which is in the heart of the insurgency area”

Source: Wildman (1970:2).

This internal view of the project's short-term political origins, suggesting economic justifications were secondary, was supported by an American agricultural consultant to the project during the 1980s:

“Development of Lam Nam Oon through the promotion of irrigated agricultural production was pursued by the central government as *a political device, aiming to assert central government rule in the area*, but also with the longer term objective to promote food self-sufficiency, alleviate extreme poverty, and demonstrate Bangkok's commitment to economic development and modernization in the area.”

(Source: Tony Zola, interviewed on 3 August, 2010, Bangkok. Emphasis added)

8.3.3 A switch in rationale to an “Integrated Rural Development Project”

Progress in project construction and implementation of any actual irrigation provision proved incredibly slow. While the dam structure was completed in 1973 and the reservoir flooded an area of 85 km² (forcing the resettlement of an estimated 1,500 households¹⁶⁰), progress towards completing the canals, roads and water delivery infrastructure to project farmers across a 32,000 ha command area was far slower in practice. In 1976, the RID requested a second USAID loan of \$4.5 million, in order to provide:

“....some equipment essential to Operations and Maintenance work on the installed system and technical assistance to design and test on-farm water delivery systems as well as establish an integrated mode for planning and delivering inputs to the Lam Nam Oon area by seven different departments of government”

Source: Dalton (1981:15).

USAID and RID employed a US consultancy company (Engineering Consultants Inc.¹⁶¹) to provide technical advice in implementing the project, which was now seen by the foreign donors as less of an irrigation development project *per se* and more of an “Integrated Rural Development Project” (LNO-IRDP) targeted towards wider development concerns in the command and resettlement areas above the reservoir, although preparations for this new phase took a further three years to negotiate. However, it appeared that this shift in focus towards cross-departmental sharing of responsibility, on-farm development, farmer training, community participation and development integration goals, did not necessarily appeal to the RID that was fixated on implementing an engineering-oriented, irrigation infrastructure development project that it alone had controlled up until that point (Tony Zola, personal interview, 3 August 2010). RID as the main partner agency was reportedly uncomfortable with

¹⁶⁰ The actual number was nearer 1,800 families, some of whom were still struggling for compensation in November 2009, when I observed a meeting of project-affected persons.

¹⁶¹ This company later changed its name to Louis Berger International Inc. and kept a small technical advisory team at LNOIP until 1991

the loss of control over decision-making authority and dragged its heels in implementing reforms, but as it was an irrigation project without any demand for its water from farmers at that stage (contrary to pre-project assertions), there were few lateral canals built¹⁶² and minimal irrigation occurring in practice, perhaps RID felt obliged to play along with the American demands for the project's second phase.

By the early 1980s, the Northeast's communist insurgency was all but over following an amnesty offered by the government to CPT members, the withdrawal of funding by China and the return of US forces from military bases with a concomitant decrease in development aid budgets and strategic interest in the region. The project's economic performance proved to be far below expectation and by 1982, USAID were keen to close the project. In a mid-term evaluation, USAID consultants were fairly gloomy about the economic outlook for the project and its prospects for achieving benefits for the target beneficiaries or returns to the lenders,

“[T]he fundamental economic problem is that the project will not be able to produce sufficient economic return on the investment to cover the cost.....When the assumptions regarding future costs are varied, the Project, in all cases produces benefit/cost ratios of less than one, negative net present values and internal rates of return of less than three per cent”

Source: Schoux et al (1981:4).

A separate donor evaluation found that virtually none of the non-infrastructure construction target indicators for integration activities had been reached, and “only about 20 percent of the area intended for dry season irrigation had actually received water after four seasons of system operation” (Muscat, 1982:vi). Furthermore, a large fraction of the canal outlets were reported non-functioning due to deterioration, faulty design, and deliberate locking due to the absence of farm-connecting distribution channels. The same author noted that contrary to conventional wisdom regarding rural labour in the Northeast being underemployed in the dry season and supposedly desperate for the agricultural opportunities provided by irrigation, “farmers do have other income earning opportunities” (Muscat, 1982:vii), and concluded that “mere provision of water cannot be assumed to be sufficient to induce farmers to cultivate”.

¹⁶² On-farm construction of ditches and dykes and land consolidation did not actually begin until 1978 (Dolinsky, 1995)

By the end of the LNO-IRDP phase (1979-1985) of USAID support, external evaluations had become far more upbeat about the project's prospects than four years earlier, despite there still only being a relatively small proportion of the overall irrigable land actually being cultivated in the dry season, despite plentiful water (Morgan et al., 1986). The project now had built most tertiary canal infrastructure and consolidated on-farm holdings, yet the development consultants were frustrated by how few villagers were using the system in the dry season. In the opinion of Morgan et al (1986), they perceived that the main obstacle was poor market development for cash crops, not water deficiency, and set about the task of introducing high value crops to the farmers, improving extension services and linking farmers to markets and vice versa. Prime Minister Prem Tinsulanond was credited with boosting the project's fortunes by making a timely public announcement on national television and radio channels that state agencies should work more closely with the private sector and the government would promote the establishment of foreign agribusiness companies in the Northeast via state subsidies and other incentives (Tony Zola, personal interview, 3 August, 2010).



Fig. 8.2 (left) An RID Operation and Maintenance Sub-office on the Left Main Canal during April 2010, when the canal was not in use.



Fig. 8.3 (right) Villagers fishing in Right Main Canal immediately below reservoir outlet in November 2009, during the main rice crop harvest period, showing the poorly acknowledged multi-purpose nature of irrigation canals

8.3.4 Switch from irrigation to agribusiness promotion project – a “success”?

Given the show of support from Bangkok, the project altered its *raison d'être* again to be framed as less irrigational and more agribusiness in its objectives. By the end of the LNO-IRDP, buoyed by higher interest from farmers in using at least some of the water for crops other than rice (mostly groundnuts) and changes in Thai state macro-policy towards a more “pro-business and export-oriented” outlook (Dolinsky, 1995:5), USAID regained an interest in the project and looked on it as a potential testing ground for introducing a Western agribusiness and contract farming model. Thus, the US government stepped forward again to fund a third project phase titled the Agriculture Technology Transfer Project (1986-88), which was followed immediately by another project along the same lines, but this time fully funded by the Thai government, named the Integrated Agro-Production and Marketing Project (IAMP) (1987-91). Between 1985 and 1990, the number of agribusinesses operating at Lam Nam Oon, both foreign and domestic, increased from three to thirteen (Dolinsky, 1995). At its peak in 1993, the number of families involved in contract farming reached about 4,000 and the value of farm production had increased 24 fold on 1983 values. Consulting for USAID, Dolinsky (1995) believed that prospects for further agribusiness and contract farming expansion in the area were favourable, due to the plentiful water, technologically competent farmers and agribusiness friendly local environment. Lam Nam Oon was considered a remarkable success story amongst an otherwise quite poor record of irrigation development performance in Northeast Thailand and was used a “model” for other projects to follow (Sansonthi Boonyothayan, Interviewed 24 November, 2009). Indeed, the project was awarded the title of, “Outstanding Irrigation Project in all of Thailand” by the Royal Irrigation Department (RID) in 1990 (Skogerboe and Merkley, 1996) and it was widely considered a model for other irrigation projects to follow (Royal Irrigation Department, 2003). But was the project the unqualified success claimed by proponents and was it sustainable?

While, the short-term prospects for the project may have seemed rosy in comparison to other irrigation projects in the Northeast where farmers had voted with their feet and left the land in droves, but perhaps USAID was being over-selective in its narratives and only considering part of a wider story (Rigg, 2001; Floch et al., 2007).

In the longer term, the model promoted was in effect sowing the seeds of its own demise, by failing to take sustainability issues seriously enough. According to civil society campaigners, the “Green Revolution” farming methods promoted in the Northeast, required large quantities of agro-chemicals that were unsustainable, leading to serious environmental and human health impacts, as well as leaving farmers in debt (Sluiter, 1992; Bello et al., 1998).

By 2009, it seemed apparent that Dolinsky’s positive projections about agribusiness trends had not materialised and the early 1990s hubris about the project appeared overblown. Contract farming continued with nine companies still remaining in the area, but the number of households involved had reduced to 1,547 households cultivating an area of just 695 ha of high value cash crops in the 2009 dry season (Sansonthi Boonyothayan, personal communication, February 2010). The area reportedly increased to over 1,200 ha of cash crops in the 2009-10 dry season, but an area double this was devoted to *naa prang* (dry season rice) (Irrigation Office No. 5 Udon Thani, 2010), a crop the USAID project had tried to phase out due to its marginal value and high water demand. For the first time since operations began apparently, the LNOIP experienced a shortage of water in the 2010 dry season and had to ration water supply to farmers¹⁶³, partly resulting from poor rains the previous rainy season and the soaring demand for water from *naa prang* cultivation, as attempts to limit the area of rice grown had failed. It was apparent, however, from my assessment of the project based on direct observation and interviews with numerous stakeholders that it was being run as neither an integrated rural development project nor was agribusiness at the centre of RID’s concerns, after 35 years of being conceived primarily as an irrigation development vehicle by RID.

8.3.5 The legacy of the USAID agribusiness model

Rather than greater numbers of farmers attracted by rising incomes and economic security being attracted to contract farming of high value crops, as anticipated by the USAID model, I found a picture of caution, uncertainty and cynicism amongst many villagers I interviewed, both present and past contract farmers. Many families had

¹⁶³ This involved alternating water releases between the two main canals on a weekly basis, essentially allowing each farmer seven consecutive days of water access per fortnight.

tried contract farming but given up, due to a range of negative experiences, both financial and technical. Common complaints involved being cheated by agents who either stole money or paid farmers less than the agreed amount, often claiming crops were sub-standard quality, and with no independent adjudicator, the farmers felt powerless and had to accept whatever amount they were offered. To pay for required inputs, the farmers had to borrow on credit terms from the company¹⁶⁴, with the debt attracting accumulating interest. Sometimes they would make a profit, but other times the crop would fail and the farmers would end up owing the company money. This would lock many into a cycle of dependency with the company, as they would be obliged to carry on growing its crops the following season until the debt was repaid. Sometimes family members would be obliged to leave the village and work off-farm to earn money to repay the debt, which caused them to be reluctant to resume this form of farming on their return. The farmers were clearly the chief risk bearers in this form of exploitative agriculture that was poorly regulated by the state¹⁶⁵, replicating a scenario found in many other developing country situations post-Green Revolution (Shiva, 1998).

As farmers gradually turned their backs on contract farming at LNOIP, the industry itself started to feel the impacts and there was a general improvement in contract conditions in a bid to keep producers. Added to which, the farmers themselves became wiser to the tricks of the agents and were perhaps less naive and more demanding of the companies than in the past. As time went by, the companies had to share greater risk with the farmers and offer them more incentives to remain loyal producers, compared to a decade or two before. Even so, there were still serious risks inherent in the basic monoculture, high-risk, high-reward/loss model of intensive agriculture practiced, that had little to do with water scarcity. For example, in the 2009-10 dry season there was a widespread failure of the seed tomato crop from disease, and all farmers I spoke with in Ban Non Rua made little or no income from their cropping. Some farmers made no money at all on their four month labour investment and the companies did not try to claw back their cash investment from

¹⁶⁴ For the average family, this would involve buying seed, fertilizer, pesticides, growth hormones, and plastic sheeting from the company on credit terms, and often borrowing a cash sum too to pay for labour and tide them over until harvest, at which point it would be deducted from the value of their crop.

¹⁶⁵ To be fair, not all companies were reported to be exploitative and the problems were often located to the level of the semi-autonomous agents, but it was apparent that there was enough bad practice going on to taint the sector in the minds of many villagers.

the farmers as in the past, but bore the loss themselves. However, some farmers decided to exit contract farming, unwilling to work for little or no reward, especially as there were far better and less risky employment prospects off-farm, as farming in general appeared less attractive, especially for younger people in the village.

There was another, perhaps more persuasive reason, why people were unwilling to adopt or continue with the intensive contract farming model beyond financial risk and off-farm options alone. From interviews with numerous villagers, the principal reason given for ceasing dry season intensive cropping was due to environmental and public health concerns, as a result of pesticide use. Indeed, Dolinsky (1995:61) in her report had flagged this issue as one of potential future concern under “Lesson 10: Incorporate preventative measures to protect the populace from the hazards of pesticide sprays”, and thought failure to adequately address this issue by the state authorities and private sector, “could grow to undermine the project over the medium-term” but seemed to assume it would somehow be addressed by a vague rhetorical commitment to IPM by relevant government agencies and agribusiness. It seemed this had become a self-fulfilling prophecy, as numerous respondents I spoke with in Ban Non Rua and neighbouring villages told me they or family members had taken blood tests and were told that they had “high” or “dangerous” levels of pesticides in their bloodstream and were concerned about practicing contract farming.

Curious about this finding, I approached the local (sub-district) and provincial public health authorities for more information and the data tended to confirm the villagers’ fears were well founded. Data provided by the Tambon Naa Hua Bor Health Centre collected in 2009 from conducting Cholinesterase¹⁶⁶ blood tests on a general population sample of 301 villagers in 10 out of 19 villages in the Sub-District, suggested that 6.6 % had “normal” levels, 38.9 % had “safe” levels; 45.5 % had “at risk” levels; and 9.0 % of the population had “dangerous” levels of pesticide in their bloodstream. Similar Cholinesterase tests conducted in 2004 by the Sakhon Nakhon Provincial Public Health Office on 137 villagers directly involved in contract farming in Ban Non Rua (Moo 3) indicated that 10.9 % had “normal” levels; 13.1 % had “safe” levels; 23.4 % had “at risk” levels; and 52.6 % had “dangerous” levels of pesticide in their bloodstream (Bupsiri, 2005). Farmers who persisted with contract

¹⁶⁶ Cholinesterase tests are primarily used to measure organophosphates and to a lesser extent, carbamates, in the blood of people tested.

farming were taking protective measures, but these appeared well short of the manufacturers' recommendations, and the environmental impacts of pesticide use were an issue of concern amongst local observers, both state and non-state.

8.3.6 The rhetorical myths of participation and decentralization

The local management issues mentioned help to account for the lack of long-term success for the ideologically-inspired model of irrigated agriculture conceived by USAID for the LNOIP in a continual process of narrative re-invention and justification for what was originally billed publically as a project to solve the problems of drought and floods in the Nam Oon sub-basin. However, once USAID technocrats left the project, satisfied it was “a success” on the surface (Dolinsky, 1995; Skogerboe and Merkley, 1996), control quickly reverted to the exclusive domain of the RID, who ostensibly managed the project through a top-down, authoritarian system from its Bangkok headquarters, via an intermediary regional office located in Udon Thani. Many of the reforms or “best practices” that USAID had tried to introduce appeared to be little more than rhetorical flourishes from a by-gone era by 2009. For example, a lot of time and effort had been spent during the LNO-IRDP phase in trying to establish and strengthen Water Users Groups and above them, Water Users Associations (WUAs), as part of an international discourse of participation, co-management and decentralization in water management. As stated in one USAID report:

“The establishment of viable Water Users Groups is the most difficult requirement to achieve, as it involves a major change in the culture of Lam Nam Oon residents. Sustaining this change will require the attention of all government agencies active in the project, as well as those designated under Land Consolidation Act regulations.”

Source: Morgan and Dalton (1983:31)

Although nominal Water Users Groups (WUGs) and Water Users Association (WUAs) were established during the LNO-IRDP phase and still existed on paper, (Irrigation Office No. 5 Udon Thani, 2004), it was apparent these had become largely RID-constructs to fulfil bureaucratic purposes, rather than genuine, active

and locally-managed institutions to manage water above the level of the tertiary canal. They organized simple tasks, such as occasional tertiary canal and ditch cleaning days and had a symbolic list of rules (standardised and written by RID) and members (which did not appear to have been updated in over a decade in the example I saw). My impression was that the WUGs fulfilled an illusory function for the benefit of senior echelons of RID management that the hydrocracy was actively practicing participation and decentralization in its irrigation systems¹⁶⁷. The low institutional interest of RID in *de facto* participation and decentralization of decision-making capacity to system water users and where the impetus derived from, is given meaning in the following comments from a past consultant to the project:

“When I was working at Lam Nam Oon I was told repeatedly that the mandate of the Irrigation Dept stopped at the turnout. And whatever happened after that was none of their business; that was the farmer’s business. If they wanted to organize themselves, then they could. Well eventually, they did have a group within RID that would go out and organize water users groups. They didn’t like to do it, they didn’t think it was necessary, but because they were under pressure, because the donor gave them money to do it, they would do it.”

(Source: Anthony Zola, interviewed, 3 August, 2012)

This perspective has been noted elsewhere in Thailand, such as that of Shluter referring to large-scale systems in Central Thailand who argued that the situation was characterized by “inefficient or non-functional water users groups on the tertiary level” and questioned whether the large budgets spent on encouraging “participation” had been worth the cost. The artificial nature of “fashionable” development donor terms Participatory Irrigation Management (PIM) and Irrigation Management Transfer (IMT) when seen in practice, appear to cause a degree of confusion and suspicion to arise amongst consultants hired to reform the national irrigation sector, but with little opportunity to ground truth data (e.g. Turrall, 2008). According to a civil society activist observer living nearby the project, the management of LNOIP is as far from decentralized model of water management as ever, and farmers have to accept a water release regime decided in Bangkok:

¹⁶⁷ This perception was confirmed through an interview I conducted with the senior RID official responsible for irrigation decentralization and participation, Mr Manas Kamnertmanee, Director of the Public Participatory Promotion Office, at RID Bangkok headquarters on 4 August, 2010.

“Today, the water management regime of the Lam Nam Oon dam is still under the control of the RID.... The Water Users Groups only have to tell them [RID] how much water they will use, but do not even have power in the process of negotiating how much the agribusiness sector will get. The Water Users Groups at present are established to be nodes to coordinate the distribution of news, rather than build capacity about how to gain the most benefit from water usage. The RID itself still gives them a low priority. This causes membership to decline and the utilization area does not expand, which causes production problems.”

Source: Laothai Nilnuan, interviewed 15 December, 2009.

Farmers do not pay a direct water usage fee, which leaves the RID in a powerful position as they do not regard themselves as a service provider, but a deliverer of water granted out of the kindness of the king to subjects (*chonla-prathan*). As such the RID feels it can act in a non-transparent and unaccountable manner to water users and external parties, as one might expect from a “black box” institution. I was surprised to find that the LNOIP and Sakon Nakhon provincial RID offices had relatively little contact with other government line agencies, who regarded it as aloof and inscrutable, as its chain of command went up through a hierarchy to RID headquarters and did not extend laterally to other provincial agencies under the Ministry of Agriculture and Cooperatives. One senior provincial agricultural official told me that I should not be too concerned about the difficulties in obtaining data from LNOIP, as they too often experienced similar problems in extracting information from the provincial RID office, which was considered in their view a “special case” agency¹⁶⁸.

Borne out of Cold War regional securitization ideological roots, but ostensibly built to cure “floods and droughts” and solve local poverty, the LNOIP never quite lived up to the ideological promise of any of its subsequent makeovers and reinventions, whether as an “integrated rural development project or an “agribusiness” promotion project, although these did breathe life temporarily into an otherwise moribund project with no real demand for its water up until the early 1980s (Muscat, 1982). The project seems less “integrated” with other state agencies and non-state

¹⁶⁸ The Sakon Nakhon Provincial Irrigation Project Office is physically isolated from the other provincial government departments, located out of town in the shadow of the Phu Phan Royal Palace. Like the LNOIP, it is not formally integrated into the Ministry of Agriculture and Cooperatives Departmental structure at provincial level, as it reports to and takes orders from an exclusive established hierarchy within the RID itself.

stakeholders now, than during the USAID era of technical assistance, suggesting a regression in irrigation reform and management practices. Perhaps this demonstrates in part a “clash of cultures” and ideological visions between the more “social engineering paradigm” of USAID, and the resolutely old fashioned “engineering paradigm” of the RID, who treated the “participatory turn” as something of an elaborate charade, and as soon as the foreign consultants had packed their bags and left, were content to return to the “business-as-usual” approach of controlling the project from Bangkok at the hydraulic core. The project raises interesting questions about the degree to which the roads built by RID were an as important tool of state control and rendering the human landscape legible and amenable to control as the canals that run parallel (see Scott, 1998). LNOIP qualifies as an exemplar of hydraulic agriculture.

8.4 The Nam Songkhram Project

8.4.1 A notional hydraulic project over many decades

The Nam Songkhram Project bears many discursive and practical similarities to the Green Isaan and its successor the Khong-Chi-Mun Projects, but differs in scale, being smaller in extent and has a somewhat longer track record of attempted implementation by the state under the same basic name (see Fig. 7.1, Chapter 7). It provides an exemplar of a hydraulic project that has existed discursively as a notional entity for over four decades, but has thus far failed to make the transition into material reality, despite a prolonged period of planning, promotion and advocacy by Thai state hydrocracies, politicians and allied private sector interests. Unlike the LNOIP which was relatively rapidly transformed from a discursive plan into a material socio-ecological object on the ground, given the shared security concerns around the Phu Phan hills, the Nam Songkhram Project has thus far only existed on paper in numerous reports and in the minds of its powerful proponents. This section critically analyses the project’s evolution through various stages from its genesis up to the most recent attempts at implementation by the RID, by

considering the dominant actors and narratives in support of and opposition to its development.

Like the LNOIP, the Nam Songkhram scheme discursively emerged out of US-sponsored Mekong Committee investigations into “developing” various Mekong tributaries in the 1960s and 70s for hydropower, flood control and irrigation purposes. Ever since Zimmerman (1999) recommended regulating Mekong tributaries in the 1930s (see Chapter 6), state planners have perceived that the “peculiar” flood-drought hydrology of the Nam Songkhram Basin and connectivity with the Mekong mainstream presented challenges that were slightly more problematic than other low gradient tributaries draining the Khorat Plateau (The Secretariat, 1977). This seasonal flooding phenomenon was regarded by developmental planners as the biggest obstacle to increased agricultural productivity of the lower Nam Songkhram Basin and problematized it as a natural disaster (“*utokapai*”), that logically had to be overcome through hydraulic engineering and environmental modification approaches (Blake et al., 2009). The other familiar problem identified as needing a solution in every single state-commissioned report was the universalized issue of “drought”, seen as a root cause of local poverty, according to Breukers (1998).

8.4.2 Solutions to a problematic hydrology – a familiar refrain

In the early 1980s, the task was to “fix” the Nam Songkhram’s aberrant hydrology was assigned by the Thai government to the Interim Committee for Coordination of Investigations of the Lower Mekong Basin (based in Bangkok), who hired a Dutch consultancy company with a local partner to conduct a “pre-feasibility study” to assess ways to increase agricultural intensification and solve regional poverty (NEDECO/TEAM, 1983). NEDECO/TEAM’s collaborative report investigated the possibility of constructing a series of low storage dams on tributaries and one large flow “regulator” (it declined to term the structure a “dam”) near the Nam Songkhram’s confluence with the Mekong (see Fig 8.1), in combination with the creation of large polder-like structures on the river’s floodplain. Borrowing from Dutch land reclamation principles, these polders would render “unutilized wasteland”

fit for cultivation and allow year round cropping to be implemented via means of “modern” pumped irrigation and water control methods. The “Nam Songkhram Basin Irrigation and Flood Control Development” project envisaged that a total of 61,000 ha of land could be irrigated, scattered across several floodplain locations (NEDECO/TEAM, 1983). The project’s cost was estimated to be US\$ 90 million, although significantly, it found that the regulator structure at the river mouth was not economically viable, as flood control benefits would be minimal against the construction costs incurred, a view later reiterated by Biwater (1987) in its Green Isaan Project Master Plan (which also included a short section on the Nam Songkhram Project). Interestingly, this critical finding was subsequently ignored in later reports by Thai hydraulic agencies and, moreover, the downstream flood “regulator” became the central component of the Nam Songkhram Project.

8.4.3 Development hydrotopia meets resistance

The chronology of the Nam Songkhram Project since the 1980s has been characterized by a series of attempts by state hydraulic agencies and allied political actors to turn the NEDECO/TEAM plan into reality. The project was awarded to the Department of Energy Development and Promotion (DEDP) under the Ministry of Science, Technology and Energy to implement, as a sub-component of its much larger Khong-Chi-Mun Project portfolio (Sneddon, 2003b). In the early 1990s, Thailand’s agricultural policies were considered “probusiness” and there was a strong governmental drive to boost export-oriented agribusiness in this part of the Northeast, as noted by Dolinsky (1995) and recommended in the conclusions of numerous development master plans (e.g. Biwater, 1987). The government offered generous subsidies and tax incentives for agribusiness companies willing to relocate to the Nam Songkhram Basin and invest in modern, Green Revolution type agriculture and processing facilities, with part of the lure being the promise of irrigation infrastructure provision, extension services for farmers and market support. Indeed, ahead of the trend was the nearby Royal Development Study Centre in Sakon Nakhon that had established a tomato processing factory in the mid-80s (Pritchard and Burch, 2003), and several other agribusinesses were encouraged to move to the region in the late 1980s. In theory, farmers would no longer have to

migrate out of the Northeast to find work, but would be able to find employment locally, either on their own land as modern farmers or in the agribusiness plantations and factories.

The development hubris in the Lower Nam Songkhram Basin was exemplified by the growth of one company's activities, namely the Sun Tech Group Ltd¹⁶⁹, that steadily acquired about 9,600 ha of low-lying, flood-prone, formerly public or common ownership land using nefarious means in the late 1980s (Blake et al., 2009). Sun Tech concentrated its main agricultural activity on growing intensive tomato monocrops for processing in its own factory built in Sri Songkhram District and eventual export as canned tomatoes and tomato paste. It employed a diesel pumped irrigation system, using water abstracted from the Nam Songkhram, and had built an elaborate drainage system to avoid waterlogging. Due to alleged illegal acquisition of public land¹⁷⁰, pollution of local water sources from the heavy use of pesticides and forcible exclusion of local villagers from its land holdings, Sun Tech became the subject of local conflict and resistance against its activities by an alliance of local and national civil society groups, the most prominent being the Project for Ecological Recovery and Towards Ecological Recovery and Regional Alliance (PER/TERRA) (Blake and Pitakthepsombut, 2006b). The NGO movement concentrated on researching local culture, livelihood and environmental issues, including project impacts on one hand, and conducting advocacy work for impacted villagers and organizing local resistance against the project, by building a grassroots movement on the other. Civil rights lawyers pursued a legal case against Sun Tech Company in the provincial court for illegal purchase of public land, that eventually led to a conviction against the company and an order by the judge to return the land to the village (Blake and Pitakthepsombut, 2006b).

Thus, when the DEDP announced in 1995 that it intended to construct the Nam Songkhram Project to irrigate a planned 90,400 ha of land at a projected cost of US\$ 400 million, the civil society organizations already had a network formed on the ground with a good knowledge base and were well prepared to resist the dam

¹⁶⁹ Its parent company was a Thai owned conglomerate with multiple business activities in Central Thailand and became the largest producer of canned tomatoes in Thailand in the mid-1990s.

¹⁷⁰ Sun Tech Co Ltd was later challenged in court for illegally buying public land from villagers in Ban Dong San, and required by the court to return it to the community (Laotai Nilnuan, interview, 15 December 2009).

(Breukers, 1998). This hydraulic development utopia had at its heart a large, shallow reservoir inundating 255 km² of floodplain land¹⁷¹, from which would radiate electric pumped irrigation systems via distribution canals to water farmers' fields, based on an assumption that the energy to power the pumps would be cheap and abundant due to hydroelectricity production from damming the Mekong¹⁷². But civil society groups were in a relatively strong position to counter the Project and mobilize multi-scalar resistance against it (i.e. at the local, provincial and national levels), using experienced learned at other dam projects around Thailand gained since the 1980s, when a wave of anti-dam activism and environmentalism first started to sweep Thailand (Hirsch, 1997, 1998). A particularly valuable test case which helped hone the skills and strategies of civil society activists, academic campaigners and grassroots movements against the construction of high socio-environmental impact state infrastructure projects was the well-documented Pak Mun Dam struggle between 1992 - present (Hirsch, 1998; Foran and Manorum, 2009).

8.4.4 The project is cancelled (or merely postponed?)

A major hurdle that DEDP came up against in advancing the Nam Songkhram Project to implementation, beyond the wide-ranging civil society and grassroots opposition, turned out to be other sections of the bureaucracy, in particular the National Environment Board (NEB) and the Office for Environmental Policy and Planning (OEPP). The NEB was responsible for ensuring that state infrastructure projects complied with the Environment Law of 1992, which required large projects like this had to submit an Environmental Impact Assessment (Breukers, 1998). On several occasions the NEB rejected DEDP's EIA and requested further studies to be conducted before it could be acceptable. Each time the DEDP would hire a new group of consultants, at first from private engineering companies and latterly from Thai universities, delaying the process considerably. A public hearing held in December 1997 revealed further serious flaws with the DEDP's arguments for the project (Lohmann, 1998). Aside from the ecological and social objections noted

¹⁷¹ The reservoir footprint, incidentally, would have included much of the Sun Tech landholdings and would have required the state to pay the company compensation, if they could prove ownership

¹⁷² For many years through the late 1980s and 1990s, Thailand had a considerable excess of power production capacity, due to over-development of the sector.

above, the public transcript of the counter-narratives included concerns about archaeological and cultural heritage that would be lost to the nation, should the dam project proceed. Added to the long list of objections against the project, the opponents charged the economic argument for the project did not appear to be sound and there were too many questions left unanswered by DEDP; it seemed the odds were stacking up against the project's approval, despite strong political support from regional politicians¹⁷³ (Breukers, 1998). Without approval from the NEB, the project went into a period of dormancy and it was not until March 2002, just prior to the DEDP's dissolution, that the Cabinet under Thaksin Shinawatra's premiership finally decided to cancel the Nam Songkhram Project (Blake et al., 2009).

Like many such notional irrigational projects¹⁷⁴, however, the blueprint for the project was not discarded, but merely transferred to another hydrocracy for dusting off when the time was right. In the case of the Nam Songkhram Project, it took just a few years for the project to re-emerge, this time in the hands of the RID. In August 2005, with the lower Nam Songkhram in normal rainy season flood conditions, Thaksin and a few close members of his Cabinet flew over the floodplain in a helicopter, landed at Sri Songkhram town and declared the situation a "natural disaster" (Blake and Pitakthepsombut, 2006b). In his speech to gathered townsfolk and government officials he called for the urgent construction of a large dam on the Nam Songkhram mainstream, as the only way to solve basin floods and provide water for dry season irrigation to farmers (personal communication with an IUCN colleague who attended). With him nodding her head in agreement was the Minister for Agriculture and Cooperatives, Sudarat Keyuraphan, also crucially with oversight responsibility for the RID.

While Thaksin's government did not remain in power long enough to see the project to fruition, that visit seemed to provide the greenlight needed to set the bureaucratic wheels in motion once more, and rumours of a new dam on the Nam Songkhram and Nam Oon rivers started to circulate around Sri Songkhram District in 2006, when I

¹⁷³ The DEDP was partly controlled by a relatively small group of politicians from the North and Northeast, allied to the Chart Thai and Social Action Parties, who viewed it as a vehicle for their political aspirations.

¹⁷⁴ A better documented example of a large hydraulic project that refuses to go away, but periodically returns to the limelight every few years after being dropped for implementation by the previous government, is the highly controversial Kaeng Sua Taen dam project in northern Thailand (Handley, 2006; Lebel et al, 2009)

was still living there. The RID seem to have approached the task of ensuring its construction in a rather different manner to DEDP, using a process that appears even less transparent and more Machiavellian than previous attempts, perhaps learning from some of the earlier mistakes. A key tactic employed has been the fragmenting of the project into a series of smaller hydraulic projects (classified as “medium-scale” projects) spread across the lower Nam Songkhram Basin, four of which appear to circumvent the need to produce an EIA due to their size being below the legal requirement (see Table 8.1). This implies they will not have to satisfy the requirements of the NEB, a major stumbling block before. In its latest reincarnation, the project has been titled the “Nam Songkhram Basin Development Project” and is slated for construction between 2013 – 2020, on the basis of a discussion I had with officials in the Nakhon Phanom Provincial RID office and an RID document I was provided (Office of Construction 3 (Nam Gam Project), 2010). The officials made it clear that they regarded the Nam Songkhram river as “the last undammed river in Isaan” (cf. Sasaki et al., 2007), and it was only a matter of time before it was regulated like every other river in the region.

The stated objective of all five projects, keeping to the well-rehearsed script of their predecessors, is to provide water for agricultural purposes and relieve flooding as a natural disaster. What is perhaps most noteworthy about the project document mentioned above is the absence of detail and socio-economic justification for the projects, beyond the scantest technical description. The scheme presently assumes that there will be no reservoirs required at each dam, as the “regulators”¹⁷⁵ will store water within the river channels of the Nam Songkhram and tributaries blocked¹⁷⁶. In theory, water will be distributed to surrounding farmland by electric pumps and concrete lined canals, again sticking to a formula that has repeatedly failed across Northeast Thailand in the past (Floch and Molle, 2009a). Perhaps the most egregious change in strategies between the DEDP and the RID has been a far more stealthy approach adopted by the latter organization, now able to proceed with these projects

¹⁷⁵ There has been a trend in recent decades to avoid referring to the Thai word for a dam (“*kheuan*”) in official narratives, due to the negative connotations it is believed to hold in public perceptions. Hence, dam project proponents will frequently prefer to refer to them by euphemisms such as “*pratoe rabai naam*” (water gates) or “*fai*” (weir), demonstrating the importance of identifying hidden meanings behind official labels and nomenclature for power-laden terms.

¹⁷⁶ Such low storage capacities raise questions about the dry season irrigable area potential of the projects actual feasibility, although the RID never overtly concerns itself about such practicalities at other similar projects.

under the cloak of “participation”, by putting them through the rubber stamping process of the RBOs, which have no authority to block them, even if they were more representative in terms of state and non-state actor composition. Thus, there appears to be a distinct inevitability about the five new projects moving forward to construction without any meaningful external scrutiny or opposition.

For example, the chief of the Sri Songkhram District Agriculture Office claimed he knew nothing about these projects, as his office was not directly informed about provincial irrigation development plans by the RID (Jeddy Khotamitr, interviewed, 19 July 2010). The same was true for other villagers, civil society activists and government officials consulted during fieldwork, who professed little knowledge about the RID plans. In fact, I did not encounter any overt opposition to these well-advanced plans (in marked contrast to the DEDP plans 15 years before), as nobody I spoke with appeared to be informed about their existence, beyond RID officials and the political patronage network of the Deputy Minister for Agriculture and Cooperatives and Nakhon Phanom MP, Supachai Phosu (see next section).

Project location (river)	Project Type	Planned construction period	Cost (\$)	Potential irrigable area (ha)	Irrigation cost (\$/ha)
Baan Agaad Amnuay, Sakon Nakhon (Nam Yam)	Water gates regulator & med-scale irrigation	2009-2012	14,516,129	800	18,145
Baan Nong Bua, Nakhon Phanom (Nam Oon)	Water gates regulator & med-scale irrigation	2009-2012	21,802,854	1,920	11,356
Baan Huay Sai, Nong Khai (Huay Sai/Nam Songkhram)	Water gates regulator & med-scale irrigation	2011-2014	43,974,061	12,128	3,656
Baan Gor, Sakon Nakhon (Nam Yam)	Water gates regulator & med-scale irrigation	2012-2015	12,690,745	2,400	5,288
Baan Naa Phiang, Nakhon Phanom (Nam Songkhram)	Water gates regulator & large scale irrigation	2013-2020	226,743,552	44,112	5,140
	TOTAL	2009-2020	319,727,341	61,360	5,210

Table 8.1 Irrigation projects proposed under the RID’s Nam Songkhram Basin Development Project (Adapted from Office of Construction 3 (Nam Gam Project), 2010))

8.4.5 Political legitimization of latest project plans by RID

As matters stood at the time of fieldwork, there was no discernible opposition to the projects as there was no apparent public knowledge about them, beyond a small rump of actors within the bureaucracy. The RID seemed to be following a logic of

picking the low lying fruits first and that once the first four smaller and cheaper dams were built on the tributaries, the field would be cleared for the final *pièce de résistance*, the Nam Songkhram regulator dam at Baan Naa Phiang costing over five times more than the next cheapest dam at Baan Huay Sai and over seventeen times the cost of the dam at Baan Gor. In constructing the smaller projects first, a minor army of RID-employed engineers and miscellaneous officials would be kept in work; contracts could be signed with external contractors; surpluses extracted and rent sought; local political elites could show they deliver on pre-election promises to deliver irrigation systems to voters; there would be temporary construction employment for a few; and villagers could temporarily believe that irrigational utopia was around the corner. (At least until the promises proved empty, irrigation development failed to solve any underlying problems and the system abandoned like at countless other sites across Northeast Thailand.)

Perhaps the most critical factor dictating a strong likelihood that most if not all of the projects under the Nam Songkhram Basin Development Project plan will progress to implementation was the tacit support given to the RID's hydraulic mission being extended by the Nakhon Phanom MP and Sri Songkhram District native, Supachai Phosu, who serendipitously was promoted to the position of Deputy Minister of Agriculture and Cooperatives by a deft defection from the opposition benches to the government coalition in 2008¹⁷⁷. This position gave him powerful influence within the Ministry to strengthen his political base in Nakhon Phanom and surrounding provinces, by delivering populist development projects to his homeland and playing the role of a benevolent paternalistic figure, following in the footsteps of numerous regional patron-wielding strongmen politicians before him. Indeed, in our interview conducted in the backseat of a police-escorted car en route to a political rally¹⁷⁸, he

¹⁷⁷ Supachai defected from the Phak Palang Prachachon (People's Power Party) to the Bhumjaithai Party under Newin Chidchob, a powerful mafioso-like politician controlling a large clique of Isaan-based MPs. In December 2008, his party helped the opposition Democrat Party to break an ongoing political stalemate and form a new government under Abhisit Vejjajiva. As a defector from the political party of Thaksin Shinawatra, Supachai was disliked by many in his constituency sympathetic to the Red Shirts movement and was physically attacked in late 2009, leading to extra police protection at the time I interviewed him in June 2010.

¹⁷⁸ At the rally for local womens' groups, Supachai boasted he had already secured 5 billion baht worth of infrastructure projects for Nakhon Phanom province and would guarantee more budget if the people voted for him at the next elections.

confided to me that his political role model to emulate was Banharn Silpa-Archa¹⁷⁹, a powerful politician infamous for nepotistically showering development projects on his home province in Central Thailand (Ockey, 2005). He claimed he wanted to assure Nakhon Phanom developed in a similar manner to Banharn's Suphan Buri in the Central Plains, delivering new roads and irrigation development projects as the main engines of development, in shades of development rhetoric stretching back to Sarit in the early 1960s.

Rather ironically, Supachai claimed to have opposed the Nam Songkhram Project in the 1990s when it was under the mantle of the DEDP, representing perhaps the majority views of local people living in villages that stood to be negatively impacted by the dam's reservoir. He told me he believed it would have destroyed the *paa boong paa thaam*¹⁸⁰ and harmed the environment, but he had now changed his mind, arguing that the local environment had already been destroyed by other state projects and villagers were no longer dependent on harvesting wetlands resources for their livelihoods, but rice farming instead. Villagers' top priorities at present, he believed, were bringing rainy season floods under control and providing solutions to dry season drought; and fortunately he was finally in a position to solve their problems for the first time. To show he could deliver on his promises, Supachai boasted that he had been the main catalyst in building a new concrete bridge over the Mekong from Nakhon Phanom to Laos costing US\$ 57 million and constructing new six-lane highways in the province during his short tenure. His next task was to bring prosperity to farmers by introducing widespread irrigation development across the province:

“Hence, what I want to do because I have the luck to be a politician in this government - now I am a minister - is that streams, rivers, waterways, swamps everywhere should be dredged, should be improved as *gaem ling* projects to store water in the dry season. I want all the tributaries of the Nam Songkhram and the Mekong River in Nakhon Phanom to have water gates and weirs to store water for agricultural purposes. Wherever

¹⁷⁹ Banharn Silpa-Archa (Prime Minister 1995-96) is known as the godfather (*jao pho*) of Suphan Buri province, which he has zealously controlled for two generations as a kind of personal fiefdom. He also has a reputation for wielding considerable influence over the RID in ensuring irrigation water is allocated first to his constituents' farms in Suphan Buri province from the Chainat Dam on the Chao Phraya river, before those of less influential constituencies nearby (Molle, 2003).

¹⁸⁰ This is the local Isaan name for a type of freshwater wetland forest habitat which is able to tolerate long periods of flooding, followed by desiccation during the dry season. It is now thought to cover less than 5 % of its former range.

there are uplands, they should have electric pumping stations and irrigation systems built with pipes, canals or small feeder canals to cover the entire area. That would mean a better quality of life for Nakhon Phanom people.”

(Source: H.E. Supachai Phosu, interviewed on 27 June, 2010)

Supachai perceived that virtually the *entire* province could be developed for irrigation, transforming both water sources and agricultural lands, with a strident belief in the power of technology overcoming nature. He also was keen to promote the king’s discourse of “*gaem ling*” as a part of the solution and reproduced the belief that the investment in irrigation would improve people’s “quality of life”. This was not idle talk, as he pointed out several dams under construction on small Mekong tributaries that he had instigated, as we sped past them in the car. He told me he was a strong advocate of the “water gates” project shortly to be built across the Nam Oon less than one kilometre from Sri Songkhram township and estimated to cost \$ 9.6 million, which had first been mooted in 2005 when Thaksin flew in to inspect the floods. Furthermore, one of the Bhumjaithai Party’s headline policies for the July 2011 election¹⁸¹ was to build an irrigation system in every sub-district nationwide (“*neung tambon, neung chonla-prathaan*”) (see Fig. 5.1, Chapter 5). The Nam Songkhram Project was given extra momentum with Supachai’s political muscle behind it.

Locally in Baan Naa Phiang, I found a general antipathy towards the *idea* of the Nam Songkhram Project, perhaps borne from lack of knowledge and awareness about its imminence. There had been no government officials or civil society visiting to inform them about the project, either in a positive or negative light, so it was not yet a tangible entity like it appeared in the mind of Supachai, for example. If I mentioned it, people told me they had not heard about it and so had little clue if it would be a good or bad thing for them. Some part-time fishermen who had been opponents of the DEDP dam project told me they were worried it might affect the quality of fishing by blocking runs of migratory fish and alter water flows, while a few people were concerned it might lead to worse flooding and loss of bankside vegetation. The only person who seemed to possess a fair knowledge about the

¹⁸¹ In the event, the Bhumjaithai Party did rather poorly in the general election winning only 34 seats and Supachai was not re-elected in Nakhon Phanom, losing his seat to a Pheua Thai Party candidate, strongly supported by the Red Shirt movement in NE Thailand.

project was the ex-headman and respected village elder, *pho yai* Sanguan Phosu, who in conversation repeatedly stressed the fact that he was a relation of the Minister Supachai. Active as a vote canvasser for Supachai and would-be local politician himself, Sanguan had unsuccessfully stood for Chairman of the Tha Bor Songkhram TAO in 2009 and was also Chairman of the Sri Songkhram District Agricultural Cooperative.

Like his patron, he expressed an opinion that was firmly in favour of the Nam Songkhram Project, believing it would stabilize water levels in the river and provide cheap and convenient irrigation for local villagers, reasoning that it would:

“.....if it stores water in the Nam Songkhram river so that it’s full to the banks, then there will be no impacts, and actually it will benefit more people than at present, as there is little water in the Nam Songkhram..... If an electric pumping system is used, then it must be high voltage and will require a large budget. But if a lot of water is raised, then maybe it would need less energy to pump.”

(Source: Interview with Sanguan Phosu, Baan Naa Phiang, 27 May 2010)

Due to his longevity as headman, *pho yai* Sanguan was an influential figure within Baan Naa Phiang and could be considered a local elite still controlling one faction within the village with unsurpassed links to powerful individuals and groups outside the village. He undoubtedly recognised there could be potential financial and political rewards to be gained if he could help swing village opinion towards favouring the project, or at least not opposing it. I detected there was some tension or competition between him and the present headman on this matter, and the village appeared divided over its stance on certain water resources development issues where the headman and Sanguan disagreed, most obvious in the case of Nong Saeng reservoir (see Sect 8.5 below).

In summary, the rise, demise and return of the Nam Songkhram Project in a new guise suggests a truism in Thai hydraulic development, that no infrastructural project, once it becomes a discursive construct in the minds of powerful hydrocrats and their political allies, ever disappears entirely even when supposedly “cancelled”. Rather the plan may gestate a few years on the shelves of hydrocracies, but is perpetually ready to be dusted off and recycled at a later stage, when political conditions appear more favourable to its implementation. This interpretation was supported by the

words of an RID official interviewed by Lebel et al (2009:284) who was reported to have said: “[A] dam is a long-term project. It may take decades to overcome obstacles [to its building], but it will happen one day.’ Promises shift with time and purpose.” Such irrigationalist and hydraulic mission thinking were crystallized and given discursive authority through Supachai’s narrative (see quote above), given the Minister’s potential to transform notional plans into material reality under a veil of populist democracy and participation enabled by Thailand’s present political landscape, but was actually good old fashioned political patronage networks in action. He ominously claimed he wanted to “develop” and improve “all” waterways in the province for irrigation, using a raft of technologies and hardware solutions. It seemed as if the earlier failures to implement the DEDP project had been a dress rehearsal, and with the experience gained from past obstacles and skirmishes against resistance, like a war strategist the RID was now better prepared to implement “the final solution” against the Nam Songkhram’s floods and droughts over the coming years.

8.5 Nong Saeng, Baan Naa Phiang

8.5.1 Small-scale swamp conversion by state agencies

In contrast to the first two cases, this case examines a minor water resources development at the community level, located at Baan Naa Phiang, one of the case study villages. This village is located on the fringes of the lower Nam Songkhram floodplain, lying within a large meander of the river and surrounded by a variety of water sources (natural and artificial, ephemeral and permanent) and wetlands habitats (see Fig 8.4 below). Crop-based agriculture used to play a secondary role to fishing, livestock raising and harvesting forest and wetlands products as major livelihood occupations up until a generation ago, since when there has been a rapid expansion of the agricultural frontier into the surrounding wetlands habitat for crops and eucalyptus plantations (Blake and Pitakthepsombut, 2006a; Blake et al., 2009). Wet season rice cropping for subsistence purposes formed the mainstay of rice production, with the cultivation area constrained by the extent of annual flooding.

Villagers were not really interested in practicing dry season rice cultivation, beyond a minor amount of *naa saeng*¹⁸², as other resources were considered plentiful and it was not a village tradition (Blake and Pitakthepsombut, 2006a).

The state began to construct water storage structures locally in the mid-1980s and there are at least four artificial reservoirs around the village, located on former open access natural swamp sites using low dams. Of these water bodies, Nong Saeng is located nearest to the village and was originally an ephemeral body of water that flooded in the wet season and shrank to just a few *rai* of open water towards the end of the dry season and used by villagers as a common pool resource for fishing, livestock grazing, collection of wetlands products, etc. It was converted into a reservoir through a series of development projects in several stages over a number of years, funded by various state agencies including ARD and the Provincial Administration Organization (PAO). Up until a few years ago, with little demand from dry season agriculture, the water levels of the reservoirs was determined more by natural seepage and evaporation and nobody was concerned about water scarcity issues until a few years ago, according to villagers interviewed.

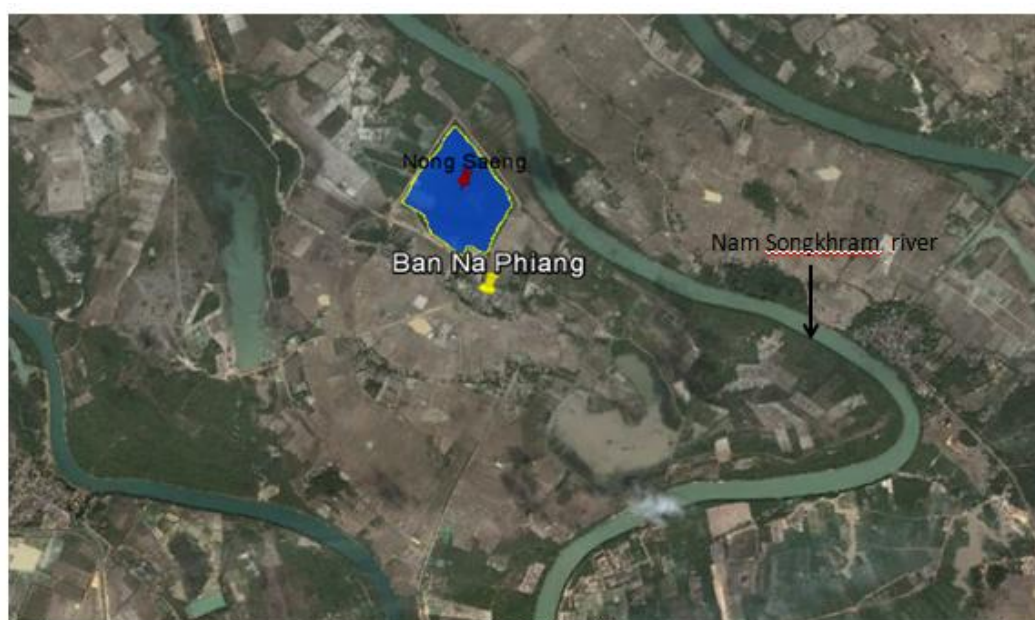


Fig. 8.4 Satellite image of Baan Naa Phiang and environs, indicating the relative profusion of local water sources and proximity to the Nam Songkhram river meander. The area occupied by Nong Saeng "swamp" is highlighted in blue, although only a small proportion is actually surface water in the dry season. In the wet season, much of the land near the river will be inundated by floods for two to four months. (Source: Google Earth. Image date: 1-19-07)

¹⁸² *Naa saeng* is a low intensity form of rice cropping in wetland swamps of the lower Nam Songkhram Basin that requires no direct irrigation but relies on receding floods and residual moisture.

8.5.2 An artificially-induced water scarcity “crisis”

The 2009 wet season was unspectacular in terms of precipitation in Northeast Thailand and the Nam Songkhram river overtopped its banks for only a relatively short period, leading to less than average recharge for on-floodplain water sources, like Nong Saeng. As a result, at the end of the rainy season the reservoir was well below its normal level, which happened to coincide with a remarkable boom in dry season rice cultivation (*naa prang*) adjacent to Nong Saeng on newly reclaimed forestland. The area of *naa prang* cultivated in the 2009/10 dry season around Nong Saeng alone was estimated by the headman to be at about 550 rai (88 ha) farmed by 45 households, a significant but unquantified increase on the previous year’s area¹⁸³. This rapid expansion in *naa prang* cultivation locally over the course of just a few years, was mirrored by similar trends occurring in the wider district of Sri Songkhram¹⁸⁴ (see Table 8.2) and other parts of the Northeast. Although the reasons for this boom are politically complex, a major contributory factor can be traced to a central government policy of providing guaranteed price subsidies for three key cash crops¹⁸⁵, introduced in 2009 by the Democrat-led coalition government as a populist scheme to curry favour with the rural electorate (Arunmas, 2010).

	2008/09 (unit: rai)	2009/10 (unit: rai)	% increase
Sri Songkhram District	15,902	44,510	280
Tha Bor Songkhram Songkhram Sub-district	5,951	18,224	306
Baan Naa Phiang (Moo 5)	722	1,207	167

Table 8.2 Registered dry season rice production (*naa prang*) area cultivated in Sri Songkhram District and Tha Bor Songkhram Sub-district over two seasons (Source: Data provided by Sri Songkhram District Agriculture Office, 19 July 2010)

¹⁸³ In previous years without a subsidy, there was less incentive to accurately measure and maximise cultivation area, so villagers were less apt to record area grown.

¹⁸⁴ In 2004/05 dry season, the total recorded area of *naa prang* grown in Sri Songkhram District was 5,357 rai (c. 857 ha), nearly all glutinous rice production (Blake and Pithakthepsombut, 2006a), suggesting there has been about an 8-fold increase in *naa prang* and local water demand over just five years

¹⁸⁵ The three crops subsidized by the price pledging scheme above market rates were rice, cassava and maize. The scheme had led to a government glut of stored rice of over 16 million tonnes by 2012, which had cost the taxpayer a reported 300 billion baht in subsidies (Pongvuthitharn, 2012).

Rice Variety	No. families	Area planted (rai)		Production (Tonnes)	Yield (kg/rai)
		rai	ha		
Non-glutinous rice (various)	2,578	30,568	4,891	20,950	685
Pathum Thani	451	5,598	896	3,843	686
Glutinous rice	1,340	8,344	1,335	5,256	630
TOTAL		44,510	7,122	30,049	

Table 8.3 2009/10 registered dry season rice production (*naa prang*) in Sri Songkhram District (Source: Department of Agricultural Extension database, 26 May 2010, provided by Sri Songkhram District Agriculture Office, 19 July 2010)

As well as the political economy derived explanation driving dry season irrigated rice cultivation expansion, I also detected more cultural and ideological explanations at work. Having interviewed and surveyed a wide cross-section of villagers practicing *naa prang* cultivation, I found a relatively common explanation for the recent popular uptake of the practice was couched in terms of peer pressure and social stigma that placed a high importance on maximizing rice production as an expression of modernity and national patriotism. The social pressure emanated from a complex mix of national media, local leaders, politicians, government officials, family members and neighbours who had already adopted the technology. For example, I followed-up the case of two unmarried sisters with a reliable source of income from off-farm family remissions, who decided to try *naa prang* for the first time in the 2009-10 dry season on previously forested wetland they claimed basic tenure over. The investment in rice involved a high capital outlay to clear the remnant forest, level about 5 *rai* of land and convert it to banded paddy fields, and dig an inlet canal, before any input costs of rice cultivation had been calculated. The investment costs for the venture were borrowed money from the Village Development Fund and partly lent by absent family members who wanted to share the rice produced. They recognized that it could be risky business, given a lack of previous experience in dry season rice growing and deficiency of household labour (just the two women).

The sisters explained their investment decision was motivated by the exhortations of neighbours and family that *naa prang* represented modern and progressive agriculture, and they could potentially earn a lot of money, if it proved successful

and the government continued paying a guaranteed price subsidy. A propaganda campaign to promote *naa prang* cultivation was widely advertised through a variety of state media as a national project to keep Thailand as the world's leading rice exporting nation. Farmers in the irrigated Central Plains were feted in official narratives for their ability to grow two or even three crops of rice per year, with an implicit sub-text understood by villagers in the Northeast that single cropped *naa bee* was one of the reasons the region lagged the rest of Thailand in terms of wealth and development. To not participate in growing extra rice for the nation would signify an unwillingness to help the nation's rice exports and prove oneself as a modern farmer. To persist in cultivating just a single crop of rice would mark one out as "non-progressive" (*mai jaleun*) amongst *naa prang* cultivating peers, so there appeared to be a kind of fear of stigmatization at play in the sisters' rationale to invest.

As matters transpired, the sisters' *naa prang* gamble did not pay off. Due to a variety of factors, including inadequate crop maintenance, uneven irrigation, untreated pest damage and disease problems, their rice crop was poor quality and achieved a low yield. Straight after harvest, they sold the crop and ended up making a loss on the variable costs, let alone the paying down the capital costs for which they had incurred debt. Rather than cut their losses and exit, they rallied round family members in Bangkok to bail them out and decided to continue *naa prang* cultivation the following season, believing things could only improve. Indeed, in 2010 most of the farmers I interviewed in Baan Naa Phiang encountered serious problems from disease, pests and water scarcity and also made a loss from growing *naa prang*. If full labour input costs were factored into estimates of the investment cost of rice cultivation, then economic losses would be more serious than they commonly appear in reports¹⁸⁶. Farmers I spoke to rarely calculated their own labour costs in the economics of rice. However, the sisters' logic for continuation was evidently not based on economic considerations alone, so much as an ideological belief, reinforced by dominant social values, that growing two rice crops a year was superior to their previous single wet season cropping practice. Such beliefs are an integral part of irrigationalism.

¹⁸⁶ Data provided by the Agriculture Information Centre and based on 2008 prices indicated that the Northeast's standardized gross margins for main crop rice was -\$49 /ha (i.e. a loss) and for second crop dry season rice was \$29 /ha, according to Turrall (2008).

An inevitable corollary of the increased *naa prang* production was a closely matched rise in demand for irrigation water, placing added pressure on local water sources. While some water sources had sufficient storage capacity to cope with the extra demand, for Nong Saeng, as a shallow reservoir with low storage capacity and many new irrigators made it particularly vulnerable to such a spike in demand for water. It transpired that Nong Saeng was one of the most seriously depleted water sources in the village and district and in early 2010, the water fell to its lowest level since first utilization for *naa prang* about six years before and was reduced to a puddle (see Fig. 8.6). The situation prompted the headman, *phu-yai* Somboon (who owns rice fields relying on Nong Saeng for irrigation), to go to district authorities and declare a “drought crisis” (*pai laeng*). Once notified, the local state officials would record this artificially-induced event as a “natural disaster” and it would be passed up through the bureaucratic chain of command from the local level to Bangkok, along with hundreds or thousands of other villages in a similar predicament. All such *de facto* irrigated land in Sri Songkhram District growing rice (wet or dry season) was officially classified as “rain-fed” agriculture, which therefore made it eligible to receive future state-funded irrigation schemes, with such local declarations of “natural drought” acting as proof of the need for increased irrigation development. However, it was apparent that the most critical factor leading to local water scarcity was not meteorologically induced (although it may have been a mitigating factor), but could be attributed to a massively increased demand for irrigation that took no account of the limits of the system.

The problem of meteorological water scarcity had been discursively fixed, so what was the solution? According to *pho-yai* Sanguan Phosu, the solution to the “crisis” was clear, the state should step in to construct more water resources development projects, which he saw as the duty of the current headman to lobby for from politicians and relevant state agencies. He outlined the problem and solution narrative thus:

“In my opinion at the present time, if we look at the state of the environment in the local area.....there are many places that we must develop further with regards to water.....the leaders must prepare projects to request release of budgets for development of water sources; we need much more development than before. Whether it is dredging ponds, where the removed soil is used to build up embankments to store water

that prevents water flowing away wasted in the rainy season; or whether it is streams flowing into big rivers such as the Nam Songkhram, then there are many highly suitable places where they can be blocked with embankments. If we don't develop this water then it will cause heavy impacts on the people. Why? Because in Thailand, farmers are the backbone of the nation and make up 80 % of the country, leaving just 20 % that are merchants, contractors, government officials."

(Source: Interview with Sanguan Phosu, Baan Naa Phiang, 27 May 2010)

The first point to note is the congruence between Sanguan's narrative and that of MP Supachai in Section 8.4.5, with the sentiments expressed broadly mirroring those of many local leaders or state officials I interviewed, and coincide with the dominant discourse of state irrigation development imperatives, harking back to the era of General Sarit, who was also fond of calling farmers "the backbone of the nation"¹⁸⁷ to justify paternalistic development policies (see Chapter 5, Section 5.5). Choice phrases such as rivers "flowing away wasted" in the rainy season and needing "much more development" and funds released for the task, mimic the powerful narratives of the political and bureaucratic elite.

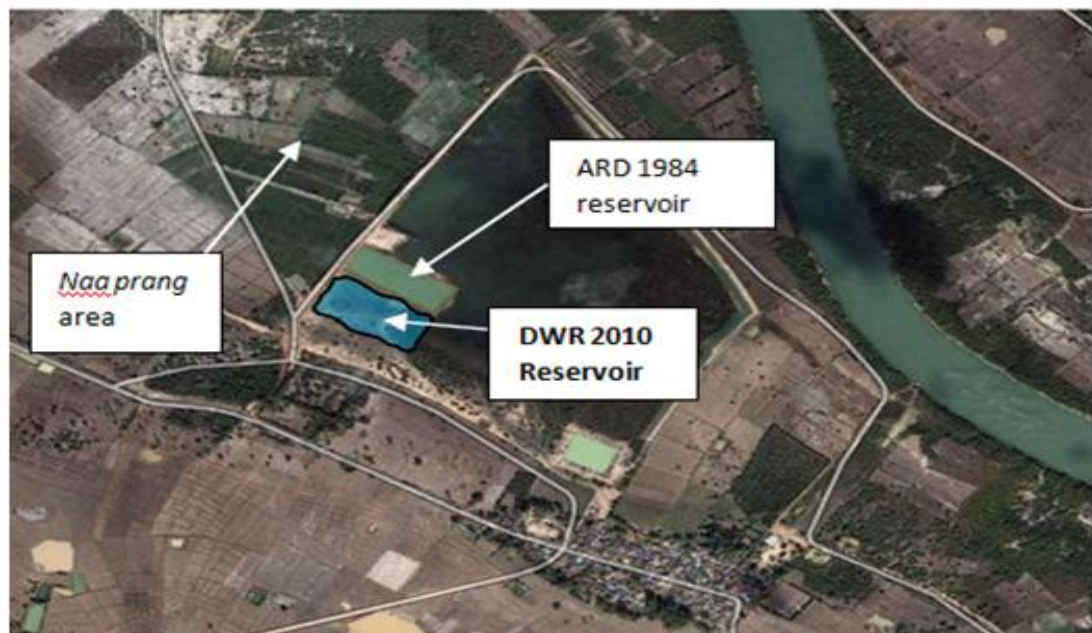


Fig. 8.5 Satellite image of Nong Saeng and environs, showing location of first reservoir built in 1984 and the new reservoir dug in 2010, plus the adjacent area of dry season irrigated rice fields. (Source: Google Maps website, <https://maps.google.co.uk/maps?hl=en>, accessed 8 December 2010)

¹⁸⁷ This phrase has been repeatedly utilized in speeches by the king, national politicians and members of the military-royalist elite of Thailand, as a way to justify state intervention to paternally "protect" farmers from external threats.

8.5.3 Bureaucratic and politician top-down solutions to the “crisis”

To address the water scarcity “crisis”, in December 2009 the villagers requested help from the provincial RID office, that promised to provide help with a temporary measure and eventually delivered an 8” diesel water pump to Nong Saeng in mid-February of 2010. Groups of farmers clubbed together to pay for fuel, but it was used for less than two days before breaking down. The RID said they would send out an engineer to repair it, but one never arrived and about a month later when it was too late to help, the pump was quietly removed. In a bid to save the crop, villagers were obliged to use their own small pumps to pump the last remaining dregs from Nong Saeng or for tail-enders, to pray for rain to save their crops. As far as I could ascertain, nobody lost their crop entirely, but yields were depressed while costs had been elevated, especially for fuel to pump and pesticide treatments, which resulted in financial losses for most farmers I interviewed, when their labour was factored in.

A supposedly more permanent solution to the problem appeared post-harvest in April 2010, with the sudden arrival at Nong Saeng of machinery to dig a second reservoir adjacent to the existing ARD one. In theory, the DWR planned project was designed to expand the water storage capacity through excavation of a rectangular reservoir in one corner of Nong Saeng. The DWR regional office responsible based in Udon Thani, had awarded the 1.4 million baht (c. US\$ 42,420) contract to a Nakhon Phanom construction company, set against a project budget on paper of two million baht¹⁸⁸ (c. US\$ 60,610). The project had apparently been negotiated between the DWR and the village through the auspices of MP Supachai, who was also said to have been the political mediator for another 80 such “identikit” reservoir dredging projects throughout Nakhon Phanom. According to *phu yai* Somboon, he had first been approached about the Nong Saeng “improvement” project in 2009, but there were no design details available at the time, and he consented to it on the basis that farmers required more water storage for *naa prang*. However, the villagers were given no further say in the matter until the arrival of the contractor.

¹⁸⁸ Inspection of provincial water resources development plans provided by DWR, indicated that all the “dredging projects” (*khlong-gan kut lawk*) executed by DWR during 2010 were budgeted at 2 million baht each.



Fig. 8.6 (left) The condition of Nong Saeng reservoir in March 2010, after being drained and pumped dry over several months for *naa prang* cultivation. Villagers catch the last remaining fish from the last puddle of water.

Fig. 8.7 (right) In April 2010 work started on digging a deeper storage reservoir by a Dept of Water Resources hired private contractor, arranged through the local MP and Deputy Minister for Agriculture and Cooperatives. Spoil was dumped on village common land adjacent to the new reservoir, just visible in the background.

The lack of local consultation caused some consternation amongst sections of the village, after the contractor began to dig a hole in the ground and proceed to dump the spoil just a few metres away within the perimeter of Nong Saeng (Fig 8.7). *Phu yai* Somboon, his two deputies and others we spoke with wanted it dumped elsewhere in the village, such as on the school's football field, in the temple grounds and raising the embankments around the wider Nong Saeng periphery. But the contractor had been instructed to dump it close to the reservoir on common grazing land, presumably to minimize his costs and maximize profits. One group adversely affected by this action were villagers who grazed cattle and buffalo on the public land used within Nong Saeng, who were a sub-altern group also not benefitting from extra water storage capacity. In an attempt to alter the situation, Somboon and his deputies tried to lobby first the contractor and then MP Supachai to dump it in the locations preferred by the villagers. They even offered to pay 100 B (c. US\$ 3) per truckload of soil to help cover the extra costs, but the contractor claimed he wanted 250 B (c. US\$ 7.50) per truckload, which was beyond the means of the villagers to afford and considered unjust, so the dumping continued *in situ*.

I detected three inter-linked discursive outcomes arose from this incident; 1/ internal leadership questions arose amongst villagers; 2/ doubts arose amongst the village leadership regarding their patronage relationship to Supachai; and 3/ murmurings of project corruption surfaced. Firstly, it resulted in some villagers perceiving Somboon

as being weaker than *pho-yai* Sanguan in representing their interests and began to compare him unfavourably with his more paternalistic predecessor. They recalled how Sanguan had been better able to negotiate with external patrons and ensure more direct developmental benefits flowed into the village, recalling the other water resources projects built during his tenure. Secondly, Somboon and his clique began to review their patronage relationship with MP Supachai and considered a shift in allegiance to another local strongman alliance (see Chapter 9, Section 9.5.1 for further discussion about this aspect of patronage network politics). Thirdly, without any prompting, Somboon and his deputy began to express their displeasure concerning the high discrepancy between the stated project budget on paper and supposed contract value, stating they believed the 600,000 B (US\$ 18,180) anomaly would be split between the interested parties (i.e. the DWR officials involved and Supachai's clique), as part of a normalized agreement applied to similar provincial state infrastructure projects. This perception of financial impropriety over Nong Saeng was repeated by several other people in the village, including the director of the village primary school, annoyed perhaps that the school had been denied an improved playing field.

Confirming the suspicion that the project was not entirely above board, a further technical discrepancy came to light, unnoticed by the villagers, namely a difference between the officially stated volume of the new reservoir and my own estimate of excavated volume. The DWR signboard erected next to the reservoir after the contractor had left noted a volume of 45,575 m³, but my own estimate based on coarse field calculations indicated it was nearer 36,000 m³, a difference of about 21 %. Taking the officially declared budget of two million baht and assuming a volume of 36,000 m³, this would indicate that the unit cost of excavation equated to 55.6 B/m³ (or 43.9 B/m³ calculated at the higher DWR volume estimate). If compared to local commercial rates given for earth excavation of about 25 B/m³, such exaggerated costs suggest that the Thai tax payer was getting rather poor value for money for this project, irrespective of the other issues that arose. It should be noted that the project involved only excavating a rectangular hole in the ground and there were no ancillary irrigation features such as pipes, sluices or canals built for the benefit of the water users.

In summary, the case of Nong Saeng illustrates how seemingly local narratives creating demand for irrigation development are closely inter-linked and co-evolve with higher order basin, regional and national-level narratives and irrigationalist discourse, both spatially and temporally. Narratives traceable back half a century or more to a paternalistic despotic national leader (Chaloemtiarana, 2007) are still evident in the contemporary discourses of local leaders and politicians justifying irrigation development imperatives. As with the case of the large-scale Nam Songkhram Project analysed above, essentially the same powerful political actors are involved in driving forward large numbers of individual small-scale projects and materially profiting from the opportunities to control decision-making arenas, while project beneficiaries are essentially excluded from decision-making, even at the most basic of levels such as where to dump spoil. Nong Saeng highlighted the fact that the DWR, as a remote hydrocracy, was unconcerned about functional irrigation system provision for the farmers, leaving that to the users themselves or another state agency to complete, but only increasing water storage capacity as a goal in itself (even if it does exaggerate the quantity). The case also was a good example in the social construction at a local level of naturalized narratives of drought, which led to inappropriate national solutions to an imagined “crisis” as the problem gets distorted on its way up to the central bureaucracy and interpreted into policy and practical infrastructural responses, unchanging over time. This predictably leads to a recursive cycle of further irrigation development exacerbating the water resources demand situation, over-stretching water resources, worsening scarcity, precipitating a decline in wetlands-dependent livelihoods and stimulating temporary demand for more irrigation development, as highlighted by Molle (2008b) in highlighting why basins become closed and “enough is never enough”, irrespective of scale.

8.6 Huay Wang Rua irrigation scheme, Baan Non Rua

8.6.1 Created through royal petition

This case represents another “community level” or small-scale irrigation development project, that bears many similarities to Nong Saeng in terms of the top-

down, state-imposed nature of irrigation development planning, design and implementation, but varies somewhat in its history, key actors and process. What did not vary was that the outcome of the development process precipitated conflict and unintended consequences, showing the coercive nature of even localized irrigation development projects in the modern context, while singularly failing to address underlying water resources needs and issues locally. Like Nong Saeng, I was able to closely follow the case of Huay Wang Rua on a monthly basis from January to August 2010.

Huay Wang Rua is an existing state “irrigation” project that traces its discursive roots back to a petition¹⁸⁹ supposedly submitted to the king and queen during a royal visit to Sakon Nakhon in 1980, requesting assistance for an irrigation system to serve villagers whose land lay outside the LNOIP (Somboon Chaitamat, interviewed on 30 May, 2010). When implemented the following year by the RID, a small storage dam and reservoir (< 2.5 ha surface area) were constructed to supply a gravity-fed canal distribution system for farmers below. The Huay Wang Rua project is situated about five kilometres south of Baan Non Rua, in an area where the land is mostly under Agricultural Land Reform Office (ALRO) status, where land tenure was insecure until recently. The reservoir lies in the Phu Phan National Park and was considered when built a Royal-Initiative Irrigation Project by the RID¹⁹⁰. The concrete-lined canal, however, collapsed during the first year and was subsequently abandoned after the villagers tried but were unable to repair it. Three families with land immediately below the reservoir benefitted from a secondary metal pipe outlet built below the level of the failed canal¹⁹¹ and were able to supplementary irrigate a small area of paddy in wet seasons with poor rainfall. One of the beneficiaries was an elderly couple who lived at the head of the canal in a basic wooden house on the edge of the forest overlooking their fields and the abandoned Huay Wang Rua canal. They

¹⁸⁹ This form of seeking royal intervention is not unusual in modern Thailand and seems to have its roots in questionable historical narratives dating back to King Ramkhamhaeng’s time, when villagers could supposedly take grievances and requests directly to the king, by simply ringing a bell outside the palace.

¹⁹⁰ I found that most of the reservoirs built by the RID situated along the foot of the Phu Phan hill range were classified as “Royal-Initiative Projects” and most of them similarly failed to provide water to more than a fraction of the predicted command area, when I carried out an extensive inspection in April 2010.

¹⁹¹ Apart from collapsing in the first year due to poor construction, the first canal was also badly designed, with its outlet drawing from too high a level from the reservoir, meaning its potential for irrigation was severely limited in any case.

moved out from Ban Non Rua about forty years ago to live independently on their land, living from what they could make, grow, raise, forage, fish, trap and hunt from the surrounding fields, forests, reservoir and wetlands, only occasionally returning to the village out of necessity or on social occasions. The couple's lifestyle and livelihood might seem to all intents highly self-sufficient and represent the practical embodiment of what is often promoted as the Thai King's "Sufficiency Economy" philosophy¹⁹². During the 2009-10 dry season, grandfather "Dtaa Mai"¹⁹³ cultivated four and a half *rai* of groundnuts in paddy fields using water from the Huay Wang Rua reservoir, the sole farmer to utilize it for irrigation after 28 years of existence. In the previous dry season Dtaa Mai grew two *rai* of groundnuts and earned 10,000 baht (c. \$325), so he was expecting to double this income in 2010. He also grew a small plantation of chilli, using water drawn from the reservoir outlet pipe, which fed directly into his fields.

8.6.2 Prolonged process of system rehabilitation

Because of the dilapidated and unusable state of the original 1981 canal, in 1999 a handful of Non Rua villagers with land further along the canal from Dtaa Mai's land decided they would like to rehabilitate the system and also gain access to water from Huay Wang Rua reservoir. When the project had first been built, the RID had established a water users group as was the mode of the day, and appointed a Chairman, Deputy Chairman and various other nominal titles, but without any water to use it had quickly become inactive. Still, on paper it appeared there were 56 members with land along the canal, who in theory stood to benefit from any rehabilitation scheme. Their total combined land holding amounted to 2,600 *rai* (416 ha) and this was recorded by the RID as the potential command area of the project, even though most of the land was actually situated above the level of the 1981 irrigation canal and impossible to irrigate without pumps, even if there had been any water in the canal. The nominal WUG chairman and village leaders initially made a request to the Sakhon Nakhon Provincial Irrigation Office to rebuild the system, and

¹⁹² There is not space to critique this ideological response by the royal elites to Thailand's economic woes, following the 1997 Asian economic crash, but the critical papers by Isager and Ivarsson (2010) and Walker (2010) are instructive in this regard.

¹⁹³ I have used a pseudonym to protect the identity of this septuagenarian farmer.

early signs were positive when RID officials later appeared to conduct a cadastral survey of land along the canal route, but then nothing was heard about the project from the state for several years. The villagers fearing they had been forgotten, followed up with the provincial RID, thereby setting an interminably ponderous bureaucratic process in motion that pushed them from one government agency to another, including the Provincial Governor's office. The Deputy Chairman of the WUG recalled that they went to see the "CEO Provincial Governor" during the Thaksin premiership and at first it appeared that he had the authority to order the RID to come out and repair the system, but it was a false hope:

"So we had a meeting in the Governor's office, in 2004, if I remember correctly. And he said, 'Yes, we can do it!' But still nothing happened. It might be because that Governor was moved that year. I don't know if the money was moved with him or not. I don't know what really happened, but actually, he agreed verbally for the RID to build it. But it got buried, because the Governor moved that year from Sakon Nakhon. I've no idea where he went, nor that sum of money..... it was eight million baht you know he gave us..."

Source: Somboon Chaitamat¹⁹⁴, Deputy Chairman of Huay Wang Rua WUG, interviewed on 30 May, 2010

It was not entirely clear what caused the delay, but it seemed to be related to the fact that this was considered a "Royally-Initiated Project" and no single agency wanted to take responsibility. Perhaps its rapid failure and lack of resolution at the time caused some embarrassment further up in the hydrocratic hierarchy? But there also appeared to be an inter-bureaucratic dispute ongoing over the project between the RID and the Royal Forestry Department (RFD). I was informed by the Headman of Moo 13, Baan Non Rua, that the RFD had objected to the dam being built in the first place, but had eventually capitulated due to the king's prerogative of prioritising water storage. But the RFD were apparently keen that no more forest should be lost in any scheme rehabilitation and that the dam crest should remain at its present level, thereby precluding any chance for increasing storage capacity.

¹⁹⁴ While Somboon was nominally the Deputy Chairman, he acted as the *de facto* leader of the WUG as the actual Chairman was old and in poor health, and had passed responsibility to Somboon. Somboon already had close links with the RID office for LNOIP as a paid canal zoneman and "irrigation volunteer". He regularly attended RID training sessions and was a strong advocate for the state's position in the interview.

In 2009, RID officials came out to re-survey the land and requested all WUG members to sign a consent form agreeing to unconditionally hand land lying along the route of the proposed new canal to the state. Reportedly everyone signed (possible social pressure at work?), even though they had not seen any design plans for the project or had it explained how it would impact their land holding. The Moo 13 Headman claimed he had not seen the RID plans and was surprisingly critical of RID's *modus operandi* in project planning and implementation, whether in the case of the LNOIP or Huay Wang Rua:

“The project has been very secretive and they have not told anyone the budget; even the headman! No one dares ask the Royal Irrigation Department as they have royal protection. All their projects pass without scrutiny”

Source: Nattapong Thochalee, Headman of Moo 13, Ban Non Rua.
Interviewed on 18 January 2010.

Other local leaders who claimed to have been given no information about the project by RID, included the *Gamnan* of Naa Hua Bor Sub-District, who concurrently held the post of Headman of Baan Non Rua, Moo 3, and executive officials at the Naa Hua Bor TAO, supposedly responsible for natural resources governance in the sub-district. In early February 2010, as with Nong Saeng, a private contractor turned up unannounced on Dtaa Mai's land and started clearing vegetation along the new canal route line (see Fig 8.8). On the first day of operations, the contractor bulldozed an unharvested chilli plantation, flattened mature fruit and hardwood trees he had planted and removing paddy bunds. Dtaa Mai was angry, but his wife told him there was nothing he could do, as this was a *state development* project. He had tried fighting the state in the past over confiscation of his farmland and placing it in the National Park, but it had gotten them nowhere she reminded him. No RID official or state representative came to explain the project to them, while Somboon Chaitamat, who had been appointed the WUG-RID liaison person kept a low profile and avoided Dtaa Mai, suggesting his loyalties lay closer to the state than with fellow villagers. Over the next few days the contractor continued preparation work, destroying the small canals that Dtaa Mai had built and blocking the water flow to his groundnut crop. He was told the water supply would be interrupted for just twelve days, but when this was not honoured and his crop began to wilt. Angered again, he asked for compensation from the sub-contractor but was refused. In early

March, the sub-contractor temporarily unblocked the pipe and allowed Dtaa Mai just two days access to water, before it was re-blocked and the groundnuts remained unirrigated up until the harvest in mid-April. If it had not been for a few unseasonal rain showers, the crop probably would have been lost, but he managed to harvest a depressed yield that was just enough to cover his costs.

The sub-contractor hired to construct the new canal and parallel roadway had no previous experience of building an irrigation system (Somboon Chaitamat, interviewed 30 May 2010). It appeared that the main contract for the project had been awarded by the Sakon Nakhon Provincial RID Office to a company called “Jai Jimee Udon Company” for 1.2 million baht (c. US\$ 36,360), but this company (which did not actually own any earth-moving equipment) had sub-contracted the work to a much smaller company for 739,993 baht (c. US\$ 22,420). Hence, this inexperienced sub-contractor was obliged to do the job as cheaply as possible and soon ran into a series of technical difficulties with the terrain. The sub-contractor complained that he would not make any money from this project and on March 21 he abandoned the project before the work was complete. I later learned from Somboon that the main contractor was obliged to hire two other sub-contractors to finish the work or risk being fined by RID for breach of contract. Apparently a dispute had arisen between the RID, the main contractor and sub-contractors about responsibility¹⁹⁵, causing the work to be delayed by several months past its scheduled end of late April.

To get an official perspective, I visited the Sakon Nakhon Provincial Irrigation Office responsible for the project on two occasions. On the second visit I was given an interview with the Director, Sratta Rangrawd, and an assistant, Yuttaphoom Khamwan. Sratta claimed to know very little about this project, even though it was one of only three irrigation projects that his office was responsible for building that year. When asked about Huay Wang Rua, Sratta deferred to his assistant to answer, who claimed that the project was part of the king’s strategy to build as many small water storage reservoirs as possible around the edge of Phu Phan hills, and not to be too worried about water delivery systems, as they could be built later. He claimed the

¹⁹⁵ The conflict situation deteriorated further apparently and was only resolved via threat of legal action by RID against the contractor, which led to the main contractor being fined 50,000 baht (c. US\$ 1,515) for breach of contract, according to local reports.

Ban Non Rua villagers only came to ask for RID's help many years after the reservoir was built, encouraged by the sight of the unused water sitting in the reservoir. But RID was not in a position to respond to the villagers' request immediately, as it was considered a low priority project amongst the many requests they received for help each year.

“They have requested for many years, but due to the budget we have, we have had to do other things instead. Because this is a small matter, a small-scale project, then it may not be really worth the investment. We had to work on other projects that were more beneficial first.... I am not sure, but they have requested help since before I moved here, which is more than five years now. This project has been in the queue since then at least. It is not that we were not interested, but it had to wait in a queue.”

Source: Yuttaphoom Khamwan, Engineer, Sakon Nakhon Provincial Irrigation Office, Huay Diek, interviewed on 29 April, 2010

The Director claimed it was only this year that the RID had sufficient funds available to implement the project, by utilizing budget from the Thai Khem Kaeng scheme. He suggested the total project budget was 2,497,000 baht (c. US\$ 75,667), although this figure contradicted an internal RID report which suggested the budget allocated was three million baht¹⁹⁶ (c. US\$ 90,910). The Director did not seem to be aware about the contractual problems with the project when asked and said the main responsibility for oversight lay with an RID sub-office located in Phanna Nikhom District. There appeared to be a serious disjuncture between the official narrative I heard from RID, the local narratives in Baan Non Rua and the empirical reality I observed unfolding on the ground.

¹⁹⁶ There were various other discrepancies apparent between the official figures provided in various RID reports and the observable reality. For example, the official data declared that the storage volume of the reservoir was 900,000 m³, which for a 2.5 ha reservoir would suggest it was on average 36 metres deep, and the stated total available water for irrigation was 5.09 million m³, both of which were vast exaggerations. By contrast, the villagers informed us that the reservoir hardly overtopped the spillway for more than a few days, and its irrigation potential was very limited. Like the target irrigation area of 416 ha, these were mere imaginary figures that had no bearing to reality and suggested deliberate deceit in exaggeration of benefits.

8.6.3 History repeats itself

In May 2010, as responsibility for completion of the part-built 1.6 km canal and roadway was still being disputed between the contractor and the RID, the first rains of the season started to erode the bare slopes of the poorly compacted structure¹⁹⁷. By June, work resumed on cutting a canal trench and lining it with concrete with the work being conducted by a locally hired sub-contractor employing a handful of villagers on a daily wage (see Fig. 8.8). As the rainy season progressed, many days were being lost to bad weather, while local labour became scarcer as villagers chose to work on their own fields rather than for the RID project. Only about 40 % of the canal structure had been finished by late July, when it was observed that completed sections were already starting to collapse through poor workmanship, soft sub-soils and slope failure. We visited the project site on eight separate occasions and talked to numerous local people, but never once met or saw an RID official on-site. Yet, during my two visits to the provincial RID headquarters, I could not help noticing that there were dozens of staff sitting around in the comfortable air conditioned offices and resort-like surrounds. After the initial ground survey, it seemed the RID engineers did not feel their duty extended to monitoring project works or ascertaining impacts on local users during and after construction.

On a final visit to the site on 11 August, an estimated 80 % of the canal had been completed and a new team of labourers had been brought in as an attempt to complete the project before the end of the rainy season. However, another inspection revealed that further sections of the new canal and roadway had washed out and serious deterioration was noticeable in several places (Fig. 8.9), suggesting that there was a strong likelihood the canal structure would have to be repaired before it could be ever be used. Even then there would almost certainly have to be ongoing repairs carried out, and the chance of abandonment again was high.

¹⁹⁷ The canal line was built entirely using local soil, which was light, sandy and easily erodible. One might have thought this simple lesson would be learned from the initial canal that failed in 1981, but apparently not.



Fig. 8.8 (left) View looking towards Phu Phan at the start of the rehabilitated canal during June 2010, where it crosses Dtaa Mai's land. The original canal built in 1981 lies immediately behind the embankment on the right of the shot, while to the left lies the fields where Dtaa Mai grew groundnuts.
 Fig. 8.9 (right) The physical condition of the uncompleted canal in August 2010, with the concrete lining cracked and collapsed at several locations along its length, and slopes of the berm failing, suggesting it would quickly follow the fate of the 1981 canal.

With such small-scale irrigation projects, once construction is complete the RID generally hand over the operation and maintenance responsibilities to the local users (*peua chai prayot lae du-lae bam-rung raksa duay-gan* – “To jointly use the benefits and maintain”). However, this was an improbable scenario at the Huay Wang Rua project, not just because of its poor condition and sub-standard construction, but due to the low likelihood of any water being available for more than a handful of the 56 theoretical members of the Water User’s Group. Put simply, the RID engineer planners had vastly exaggerated the irrigable command area and therefore the beneficiaries, perhaps as a means to increase its attractiveness for funding. The 2,600 rai (416 ha) command area assumed in the project justification was patently fraudulent, based on fanciful figures of reservoir storage capacity, water availability (Footnote 196) and land potential, as much of the area included in the estimate was above the canal. From a rough calculation of water storage capacity in the reservoir and based on Dtaa Mai’s local observations since the reservoir had been built, a more realistic estimate of potential irrigable land in the wet season would be about 150 rai (i.e. 24 ha) and 12 rai (i.e. 2 ha) maximum in the average dry season for non-rice crops.

Similar to Nong Saeng, this case study has illustrated a remarkable lack of accountability, transparency and willingness of the controlling hydrocracy to involve local people, including village leaders and TAO officials and elected representatives, at any stage of the planning, design and construction process, even with a small-scale project like this. Decision-making about the project occurred remotely, in hard to access RID offices, by faceless hydrocrats, seemingly unconcerned with project process or performance, even during the construction phase. Worse than this, it seemed none of the technical and procedural mistakes made in 1981 had been learned and were simply being repeated in 2010 – demonstrating a lack of competence in the one area that RID should be able to claim a degree of skill and knowledge. If ever subjected to external scrutiny by independent parties such projects would surely be dismissed as fundamentally uneconomic and technically unsound irrigational scams. More egregious perhaps, was the experience of voiceless, sub-altern actors like Dtaa Mai, whereby the person who should have benefitted most from the rehabilitated project, ended up its biggest economic loser and silent victim. Such effects speak to the latent coercive and violent nature of modern irrigation development on the powerless, as well as the more subtle effects of power revealed. What does this case say about irrigationalism in Thailand, beyond the seemingly untouchable and simultaneously out-of-touch nature of the RID machine, not only at the core in Bangkok, but amongst the acolytes and functionaries operating in their resort offices, where the reality of people like Dtaa Mai are filtered out? Irrigationalism is not only about creating tangible productive irrigation systems, where crops are actually grown and (some) people benefit, but it is as much about creating the illusion of irrigation (the idea), as seen vividly in this case where ultimately no actual irrigation may end up being practiced, beyond the self-serving reports of the RID.

8.7 Irrigation development projects – all state property

One common feature to emerge across all four cases and others visited during fieldwork was that regardless of scale, all irrigation development projects are in effect state property and are by default subsumed under effective state control, even

when they are supposedly transferred to the users/citizens/community to operate and maintain after construction by the state agency concerned. In the case of large-scale irrigation projects, such as LNOIP, this should be self-evident given the violent history of the project and present top-down control exerted from Bangkok over water allocation and scheduling issues, but for small-scale projects this is perhaps less explicit. It has often been assumed that smaller scales in water resources infrastructure signals greater devolution to local decision-making authority. There is clearly a wide divergence between the state's normative discourse and how local ownership and responsibility for schemes plays out in everyday practice. For example, in response to my question as to whether the canals and other parts of the irrigation system belonged to the state or the water users, and local liaison person with RID, Somboon Chaitamat answered:

“In reality, they are the property of the state, but they lend them to us, the people, to help take care of, right. They lend them to the likes of me, a farmer. I believe their goal is to provide water for us farmers so we can grow rice, but it's the property of the state and us, meaning it's up to us to take care of. The Chairman and Deputy Chairman and the members must take care of it according to the season. To clear vegetation along the canal embankments and the dam wall.....”

Source: Mr Somboon Chaitamat, Deputy Chairman of Huay Wang Rua WUG, interviewed on 30 May 2010.

The notion that irrigation projects are state property and only on loan to villagers is a critical one, as it underscores the fact that the villagers had to sign consent forms to donate (without rights to compensation) their private land holdings to the RID for the roads, canals, etc, in order for it to build them an irrigation project, which then by default becomes state property. The state is then empowered, as owners and controllers of the water and land, to “lend” the system back to villagers – seems like a sleight of hand transaction has occurred where someone has rapidly changed from owner to debtor! However, as the case of Nong Saeng and Huay Wang Rua demonstrate, regardless of scale, irrigation projects are colonised and dominated by state processes at every stage of the project cycle from conception to construction to eventual rehabilitation in some cases, confirming Kaida (1978). Thus, while the state agency upon completion of a small-scale project may erect a sign that states something like: “Given to the people to jointly use the benefits and maintain” (Fig.

8.11), means little or nothing to the local people who may (or may not) benefit from it, but have no intention of maintaining infrastructure that they had no role in creating, would cost them far more to maintain than they are ever likely to derive benefit from and do not own. Thus, the sign is a purely symbolic gesture and a discursive indicator of state conceit in believing that subjects will embrace an externally imposed ideology of irrigationalism in its entirety.



Fig. 8.10 (left) The abandoned water gate of a useless (but nearly new) canal at a small-scale irrigation project in Sri Songkhram District is branded with RID ownership insignia. A white elephant project?
 Fig. 8.11 (right) A sign next to a Royally-Initiated Project" at "Huay Sai Don Bon 2", Muang District, Sakon Nakhon stating that the government has given the reservoir to the people to jointly take care of and maintain, even though the dam is of very little utility to villagers in terms of irrigation provision.

As shown by the case studies, the empirical reality and implications of far-reaching state control is less palatable to swallow and so is ostensibly overlooked by most parties. A counter-view might posit small-scale irrigation projects, given their high maintenance costs and low benefits, are an equivalent of modern day white elephants¹⁹⁸ gifted from the state to the people, in a bizarre metaphorical reversal of the old tradition (Fig. 8.10). But with an irrigation system white elephant, the people invariably choose not to look after it and essentially let it go wild, returning it to the forest. This in a sense is a form of resistance to domination. The water flow however is stored, controlled (to a degree) and brought into the realms of state property, given that all water by default belongs to the state and is merely “gifted” from the king to the people (*chonla-prathaan*). What these cases also suggest is the need to be cautious about interpreting where managerial control lies on the basis of technology

¹⁹⁸ Meaning “something that is no longer of value to its owner [from the story that the kings of Siam made a gift of a white elephant to any courtier they disliked, the cost of maintaining one being ruinous]” (Definition in the New English Penguin Dictionary, 2000).

alone, especially when it is over seven hundred years old (cf. Stargardt, 1992; Stott, 1992).

The cases examined tended to highlight the minimal *de facto* role that water users play in water resources development and management decision-making and centralization of authority and power at the central level, although not with state agencies alone, but also a range of other actors that work in strategic alliances or discursive coalitions to further their interests (this theme is expanded upon in Chapter 9). At the same time, it was recognized that many villagers accepted with a fair degree of passivity the state's agro-managerial and hydraulic control functions and did not express overt concerns about their lack of negotiating power resulting from being recipients of state and royal hydraulic largesse, (with water extended as a gift, not a right), as might be expected with an ideological formation. Molle (2003:256) noted how in the case of the Chao Phraya basin that "relationships between state agencies and farmers have long been marked by a degree of paternalism countered by a mixture of passivity and suspicion." This is an important procedural element of irrigationalism in action, that brings Thailand gradually closer to being a more spatially uniform hydraulic society, drawing the hydraulic margins into the core, in a form of hydraulic territorialisation (cf. Vandergeest and Peluso, 1995) and authoritarian state simplifications (Scott, 1998).

8.8 Summary

This chapter has drawn on empirical evidence from four irrigation development projects in the Nam Songkhram basin representing different scales and operating over different timeframes that illustrate the ideological discourses and material practices of irrigation development. It has demonstrated that a remarkably similar set of narrative justifications for irrigation development seems to be used by dominant actors in Thailand regardless of project size, and thus the dominant discourse supporting irrigationalism in Northeast Thailand can be said to be a non-scalar dependent ideology. While certain dominant narratives that drive irrigation development may vary little across time and space (especially the "arid region" and "poor farmers as backbone of the nation" narrative), some of the main actors

involved have altered over time, in particular the ruling national and regional politicians supporting constituency pet projects and pork-barrelling tactics with the electorate. Senior state officials in the main hydrocracies are less liable to change (not having to please an electorate) and appear more ideologically entrenched than politicians who tend to be more opportunistic, as seen in the switching of rhetorical positions regarding the Nam Songkhram Project shown by MP Supachai, as his political fortunes grew.

While senior bureaucrats may be relatively entrenched in promoting the ideology of irrigationalism, this is not to say that bureaucracies are not subject to change. As was demonstrated by the case of ARD and DEDP, individual agencies supporting the hydraulic mission may rise and fall in periodic bureaucratic reform, such shakeups are usually to the advantage of the dominant hydrocracy with pre-eminent domain over irrigation development. In Thailand's case this position is occupied by the RID which has had a constant organizational presence in the Nam Songkhram Basin during the historical period under examination, and enjoys a visible bureaucratic presence in every province and material involvement in projects across all scales. More recently, it has had to fend off a degree of competition over development plans from the DWR, which seeks to impose its own hydraulic development projects within the same territory as the RID. The processes and implications of such bureaucratic competition and dominance of certain agencies is examined further in Chapter 8. Furthermore, as pointed out by Molle (2003:260), reforms tend to "meddle deeply with the distribution of power in administration as well as in political circles, redefine relations between the state and citizenry, go against deep-seated cultural representations of hierarchy and social roles, and potentially threaten those who tend to benefit from the existing patterns of water allocation." Irrigationalism remains a central part of the discursive status quo and is unlikely to be seriously challenged by civil society for the time being.

Chapter 9 Flows of Water, Power and Capital within, across and outside the Nam Songkhram Basin

“Irrigation system development, rehabilitation and improvement (modernization) is not a goal in itself, it is a means to achieve higher agricultural production, productivity and farm incomes. If the latter can hardly be achieved, the rationale for irrigation development disappears”

Source: Brolsma (1996:134), referring to EU-funded Northeast Water Management and System Improvement Project (1991-1998) [underlining in original]

9.1 Introduction

In the previous chapter, I examined the cases of four irrigation projects operating at various spatio-temporal scales and under the aegis of disparate state bureaucracies within the Nam Songkhram Basin. These included the four decades old Lam Nam Oon Irrigation Project and the notional Nam Songkhram Project, both of which emerged from an American-inspired vision of “full basin development”, where potent ideologies of modernism, technocentrism and instrumentalism were transposed onto an “undeveloped” blank canvas of the Lower Mekong Basin. The discourses supporting these ideologies were gradually absorbed and remodeled to fit peculiarly Thai political traits that incorporated aspects of nationalism, monarchism and developmentalism. It was observed from the cases that at whatever scale of implementation, irrigationalist actors displayed an indefatigable utopian, but seemingly never realized, faith in the benefits of communal irrigation development as a solution to rural poverty and water scarcity. Far from representing classic examples of “polycentric” models of water governance (Tan-Kim-Yong et al., 2005), all these cases highlighted a strongly state-centric model of water governance, where all public irrigation projects, regardless of scale, are subsumed under a top-down, control and command regime managed by the hydraulic bureaucracies and other interested elites. This observation would tend to further support the emergent modern

hydraulic society proposed by Wijeyewardene (1973), where the state hydraulic bureaucracies enjoy a pre-eminent position over nearly all aspects of national irrigation and water resources development discourse and practice.

This present chapter attempts to weave together some of the disparate observations concerning irrigational politics from the preceding chapters into a coherent narrative of how flows of water, capital and power have been effectively captured and controlled by a central elite through networks that reach out to the peripheries of the Thai state. This exercise inevitably involves a discussion of the main actors and interest groups, the power relations and networks operating within and beyond the confines of the immediate river basin. As such, it may be partly speculative in nature, but is still firmly based on the interpretation of empirical observations and interviews made in the course of the fieldwork and prior professional experience working within water resources development paradigms in the Northeast (e.g. Blake and Pitakthepsombut, 2006a; Blake et al., 2009; Molle et al., 2009a). In particular, I am interested in dissecting how the modern hydraulic mission operates in *practice*, what are the general *processes*, and which are the principal *actors* involved, both individuals and organizations, either propagating or resisting the expansion of irrigation infrastructure.

This adds further substance to answering the main research question and detail to answering the following research sub-questions:

SQ3 Which actors appear to determine control over water resources development at multiple scales, using what discourses and pathways? and,

SQ4 Which are the important power relations mechanisms at work across various scales, and can distinct “discourse coalitions” or “strategic groups” be identified?

SQ6 How closely does Thailand fit Wittfogel’s characterization as an exemplar of a “hydraulic society” in the modern-day context?

I begin the chapter by considering the main bureaucratic agencies that have shaped and guided the irrigation development discourse in the Nam Songkhram Basin and Northeast Thailand, more generally. I then consider how their interests may coincide, before discussing other important actors and organizations, both state and non-state,

and how these actors and groups may be linked through “strategic groups”, that compete or cooperate for access and control of scarce resources (Evers and Benedikter, 2009b). I go on to relate this concept to the paternalistic power relations that are critical to understanding irrigational discourses and practices at work across local to national scales.

9.2 The hydraulic bureaucracy - changing actors and institutions, but the same basic mission endures

A relatively small number of bureaucratic agencies and groups have dominated the Nam Songkhram’s hydraulic development arena and discourse in recent decades. While in the 1960s to early 80s period considerable assistance poured into the Northeast from abroad to support rural development, during the economic boom years of the late 1980s and early 90s this aid rapidly declined, which coincided with a shift of Western donors’ attention to neighbouring Indochina and away from Thailand as a “Newly Industrializing Country” and “Asian tiger” economy (Bello et al., 1998). This redirection of overseas assistance out of the Northeast in no way diminished the efforts of central government in directing national budgets towards supporting regional irrigation development programmes (Budhaka et al., 2002; Hoanh et al., 2009). Irrigation development expenditure was primarily channeled through three main bureaucracies, namely the Accelerated Rural Development Office (ARD), the Department of Energy Development and Promotion (DEDP) and the Royal Irrigation Department (RID); of which, significantly, only the latter agency has survived to the present. The ARD was a direct product of US government anti-communist insurgency assistance first funded during the Sarit era¹⁹⁹, established under the Ministry of Interior as a developmental tool for winning hearts and minds in the struggle for control over the rural hinterland (Pye, 2005; Chaloehtiarana, 2007). The ARD program had two principal aims; firstly to generate legitimacy for state development activities and secondly, to obtain intelligence reports regarding threats to the regime, maintains Chaloehtiarana (2007). It initially concentrated most

¹⁹⁹ According to Frank Sheppard, a former USAID director, the ARD concept was, “...based on the assumption that bringing additional resources to the villages could and would increase identification of the villagers with his government.” (Quotation cited in Chaloehtiarana, 2007:172).

of its resources on funding road construction²⁰⁰, but after the gradual withdrawal of American financial assistance following the end of the Indochina War, drew on domestic budgets to diversify its activities into other sectors, in particular small-scale water resources development at the sub-district level, including domestic water supply, wells, irrigation weirs, reservoirs and fish ponds. There was abundant physical evidence of ARD's local-level hydraulic legacy throughout the Nam Songkhram Basin, such as the first reservoir and embankments built at Nong Saeng, Baan Naa Phiang (see Chapter 8, Section 8.5), dredged water courses, countless collapsed concrete weirs and several abandoned pump irrigation schemes (personal observations, 2004-10).

The focal area of ARD's operations in the upper Northeast was principally border provinces along the Mekong River and areas in proximity to the US military bases classified hotbeds of communist insurgency, including the upper Nam Songkhram Basin close to Udon Thani. As Cold War national security concerns faded into memory towards the end of the 1990s, to be replaced by a more neo-liberal rhetoric of "turning battlefields into marketplaces"²⁰¹, ARD's role became increasingly redundant as its development operations duplicated the work of several other bureaucratic line agencies. As a result, it had a more difficult time justifying its existence within a modernizing Thai bureaucracy stepping into the twenty first century and was finally dissolved under the bureaucratic reform and restructuring process of 2002. Towards the end of its existence in the late 1990s, ARD proposed an "Upper Nam Songkhram Basin Development Project", which had at its core the construction of six dams (euphemistically termed "weirs") along the upper reaches of the Nam Songkhram river, four large storage reservoirs and six "canal dredging" projects, justified as usual by a narrative of solving problems of local agricultural water scarcity (Blake and Pitakthepsombut, 2006a). Although ARD itself never got the opportunity to build all these projects, they were still built nevertheless, as its staff, infrastructure and project portfolio were transferred en masse to the newly established Department of Water Resources (DWR) (see Section 9.2.2).

²⁰⁰ ARD constructed a 17,000 km network of roads nationally, of which two thirds were located in Northeast Thailand, according to Bello et al, (1998). Improved communications networks were also a vital tool of state control over the periphery, as noted by Wittfogel (1957).

²⁰¹ This ideological aspiration for increased regionalization was expressed by Prime Minister Chatchai Choonavan in the early 1990s (Floch et al, 2007).

After its formation, the DWR wasted no time in implementing the inherited projects, including construction of the two largest dam structures built to date across the Nam Songkhram mainstream, completed in 2004 at a cost of 839 million baht (or approximately \$30 million). Although DWR claimed they were built for dual purpose irrigation and flood control, several personal visits to the project sites between 2004 and 2007 indicated that the dams fulfilled neither of these functions and could be classed as development failures in every sense (Fig 9.1 and 9.2). Indeed, the flooding situation was aggravated upstream of the dams with multiple ecological impacts precipitated and no irrigation infrastructure had been installed (Blake and Pitakthepsombut, 2006a). As a result, zero agricultural land was actually irrigated by the dams, against a pre-project target command area of 7,680 ha, while the dam structures themselves were essentially abandoned by the DWR soon after completion and showed signs of serious disrepair within a few years (personal observations in 2005-06). Such failed hydraulic projects are quite common in the Nam Songkhram Basin, argues Blake et al (2009), and are visible (but silent) avatars of hydraulic society and irrigationalism.



Fig. 9.1 (left) ADWR-constructed dam, first proposed by the ARD, on the upper Nam Songkhram at Baan Nong Gaa. Supposedly a multi-purpose design for flood control and irrigation, it fulfils neither of these functions and was essentially abandoned, following completion in 2004. Feb 2005 photo.

Fig. 9.2 (right) A second DWR dam was built about 30kms upstream on the Nam Songkhram at Baan Muang about the same time. It too was abandoned without use by villagers and the DWR, while land around it was being seriously eroded by rainy season floods, illustrating the sub-standard design and construction. Feb 2006 photo.

The second agency was no longer in existence, but played a decisive role in irrigation development during the 1980s and 90s, was the Department of Energy Development and Promotion (DEDP). Formed as a successor to the National Energy Agency

(NEA), it was essentially another ideological outcome of US and Western nation interference in the region during the Cold War. It was seen as an instrument to translate planned hydraulic initiatives on the mainstream Mekong into a Thai territorial context, starting with the massive Pa Mong Dam Project (Sneddon, 2003b). The DEDP represented Thai government interests at the multi-lateral donor supported Mekong Committee for many years and enthusiastically pursued hydraulic infrastructure expansion in Northeast Thailand (alongside several other agencies), in large part through the promotion of the flagship Khong-Chi-Mun Project (KCM Project), but also the smaller Nam Songkhram Project component (see Chapter 8, Section 8.4). While there was patently a negligible hydropower generating potential in the Nam Songkhram Basin (The Secretariat, 1977), the DEDP sensed an opportunity to utilize perceived energy over-production capacity elsewhere in the grid through promotion of electric pumped irrigation schemes (Keller et al., 1981; Floch and Molle, 2009a). For the state, pumped irrigation projects appeared to simultaneously address the perceived problems of poverty and low agricultural productivity, to allow dry season cultivation without the need for expensive and land-extensive storage dams.

Because of its primary orientation towards energy production and consumption, there was a preponderance of officials in the DEDP with civil engineering qualifications and few with the skills or experience to design, plan and execute complex agricultural development projects. Such technical skills and knowledge mostly resided with staff in various departments of the Ministry of Agriculture and Cooperatives. As inter-departmental cooperation within the same ministry was rare enough in the Thai system, let alone between departments in separate ministries, so the DEDP suffered from a technical knowledge credibility gap with other branches of the bureaucracy. Perhaps to overcome this deficiency, DEDP became quite dependent on contracting external consultancies for project design and planning, both Thai and foreign²⁰². DEDP was also recognized as an agency prone to the political patronage of national and regional politicians²⁰³ linked to one or two parties,

²⁰² For example, the British consultant Sir William Halcrow and Partners and a consortium of Thai and Japanese consultancy companies were hired to compile water resources development master plans for the scheme.

²⁰³ Politicians that were closely associated with the KCM project included Prachuab Chaiyasarn (Chat Thai Party), Montri Pongpanit (Social Action Party), Yingpan Manasikarn (Social Action Party), Dr Arthit Ourairat (Seritham Party) and General Chatchai Choonavan (Chart Thai Party)

who viewed it as a route to securing future political and financial benefits, though the utopian promise of agricultural bounty it offered to voters (Sneddon, 2003b).

Following the demise of the Green Isaan Project, the KCM Project was promoted as the new hope of the region to deliver agricultural productivity increases and poverty reduction by tapping the vast, “unexploited” water reserves of the Mekong mainstream via inter-basin transfers and networks of canals. It had a proposed budget of \$US 9.1 billion to irrigate almost 800,000 ha over a 42 period including several phases, based on pumped water abstraction from the Mekong (Rojanapaiwong, 2000). Sneddon (2003b:2233) argues that the central power effect of the KCM project, was “the enrollment of a massive river basin (the Mekong) into its orbit of influence”, which empowered the actors supporting the project. However, when the original foreign consultant-designed KCM Project master plan essentially failed to win broad political support in the region, DEDP switched to hiring domestic consultants to write more feasibility studies, which essentially recycled the earlier plans to ensure they were more closely aligned to the requirements of their political patrons. A similar process of inter-departmental and inter-agency struggles was detectable in the Nam Songkhram basin in attempts to promote the Nam Songkhram Project, and both attracted civil society opposition to their implementation (Breukers, 1998; Lohmann, 1998). Khamkongsak and Law (2001) argue that powerful interests backing the KCM project embarked upon a programme of “command, control and intimidation” against critics to ensure the project proceeded, which did not even spare the United Nations-appointed Executive Officer of the Mekong Committee²⁰⁴. Dr Prakob Wirojanagud²⁰⁵, former Dean of Khon Kaen’s Faculty of Engineering, was reported to have declared that “the only demand for the project is among politicians and technocrats” (Khamkongsak and Law, 2001:28).

²⁰⁴ Chuck Lancaster, an American citizen, was reportedly given 48 hours to leave Thailand after he was accused of siding with downstream countries that wanted to veto the KCM project via the Mekong Committee (Khamkongsak and Law, 2001).

²⁰⁵ Dr Prakob was one of the respondents I interviewed in his capacity as President of Ubon Ratchatani University, where he remained a strong opponent of the KCM project (and its descendents), claiming it was technically flawed, a fantasy project of a small clique and an expensive waste of money.

9.2.1 The Royal Irrigation Department

As with the ARD, the DEDP was eventually considered redundant and dissolved during the 2002 bureaucratic shakeup by the Thaksin administration. Its large portfolio of irrigation development projects, including the stalled KCM and Nam Songkhram Projects, were transferred to the Royal Irrigation Department (RID) for future implementation. The RID was already an important hydraulic agency in the Nam Songkhram basin, with a large portfolio of small, medium and one large-scale irrigation (Lam Nam Oon) projects on its books and this inheritance provided new opportunity to further its hydraulic mission. Simultaneously, the RID acquired from DEDP another dormant blueprint plan for a large irrigation scheme in the smaller Nam Gam river basin, situated just to the south of the Nam Songkhram basin. Crucially, however, the Nam Gam basin had been pin-pointed several decades before by the king during an aerial reconnaissance mission as a river basin which showed potential for conversion to irrigated agriculture, assuming its natural flood cycle was tamed. Once in the possession of RID, it was assigned “Royally-Initiated Project” status (The Government Public Relations Department, 2012), recognized from previous experience as a symbolic tactic to speed the budget scrutiny process through and ensure minimum protest from civil society. The RID took about six years to construct the Nam Gam project, which was nearly complete in late 2009, as I commenced fieldwork. On completion of the civil works, a small army of RID engineers and allied construction contractors were preparing to move their camp to start building the Nam Songkhram Project suite of five “water gate” sub-projects (see Table 8.1).

The Nam Songkhram Project, qualified as a large-scale irrigation project and thus was planned at RID’s central headquarters, but managed through a regional office based in Ubon Ratchatani province. When questioned, RID officials seemed to have few doubts that the project would proceed according to schedule, using the same damsite previously purchased by DEDP in the 1990s (see Chapter 8, Section 8.4.3). Finding out more than the scantest of details about the Nam Songkhram Project was problematic and RID deserves a reputation as a “black box” institution (Molle, 2005),

that is hard to access internally and closed to scrutiny by external parties; whether at the local, regional and national levels of operation. In addition to the large-scale projects, it has continued to build unknown numbers of small-scale irrigation projects, the vast majority of which are transferred to local communities or the TAOs to manage, with predictable results of failure, abandonment and decay at many sites, given an absence of communal irrigation management history and underlying economic realities (see Fig. 9.6).

9.2.2 The Department of Water Resources

Having been formed as an entity only since the 2002 bureaucratic reform process (in some respects, a watershed event for altering the political landscape of Thailand's chief hydrocracies²⁰⁶), the Department of Water Resources (DWR), formed under the Ministry of Natural Resources and Environment (MoNRE), is an institutional newcomer to water resources development and management in the Nam Songkhram Basin. Emerging from a global and national discourse calling for greater participation and decentralization in natural resources governance, it was originally conceived that the DWR would primarily play a managerial and regulatory role (Molle, 2005). In theory, the DWR was established to avoid inter-agency competition and a lack of coordination over water resources development amongst a plethora of agencies located across different ministries involved in the water sector, by playing a supposedly neutral role to facilitate and direct water resources planning, policy making, regulation and coordination. The DWR states its primary mandate as: "[T]o be the core agency in proposing policy, master plan, and measures for water resources management, development, rehabilitation, utilization and problem solving as well as directing and coordinating the implementation" (Department of Water Resources, 2008). Theoretically, it would have leverage over other water-related agencies, including RID. The reality, however, appeared starkly different from the rhetoric.

²⁰⁶ Apart from the DWR and the RID, the other main hydrocracy not dealt with here as it is not directly relevant to the arguments, is the state electricity utility, the Electricity Generating Authority of Thailand (EGAT), which builds and operates hydropower dams.

For example, from the perspective of someone who was chairman of the working group set up to establish DWR and so directly involved in its genesis, but residing slightly outside of the inner circle of the bureaucracy, Dr Apichart Anukarlamphai²⁰⁷ was disappointed about the outcome of reforms he had encouraged. He had earlier attempted to establish a new apex body that would avoid duplication of the role of other agencies involved in water management, but would function strictly as a regulator and to formulate national water policy, and not become another implementing agency. Quickly, however, politicians' and bureaucrats' personal agendas in pursuing infrastructure development pathways, weak legislation and the reality of an agency dependent on a narrow professional and epistemological worldview, ensured that DWR morphed into another agency intent on unshackled pursuance of the hydraulic mission. He explained this phenomenon from the perspective of professional composition.

“..... because we took people from *Ror Por Chor*, you know, Accelerated Rural Development; we took people from the Public Works Department, the Groundwater Resources Department and from the Department of Public Health, from the groundwater section. We even had some people from the Land Development Department. We had some people from what before we called the Department of Energy Promotion and so on, which used to do a lot of pumping in Isaan. So the composition of the staff in the Department is from different agencies and most of them are engineers or previously engaged in project implementation. So it takes time for them to change their mindset....”

(Source: Dr Apichart Anukarlamphai, President of the Thai Water Resources Association, interviewed on 4 June 2012)

Having abandoned any regulatory role over the sector and turned its attention to the planning and development of large-scale infrastructure projects and supply-led solutions, DWR increasingly came to be perceived as a rival hydraulic bureaucracy to RID and other state agencies primarily involved in engineering-based solutions to perceived water scarcity issues (see Section 9.2.3 below). Through the rhetorical adoption of IWRM as a management tool and the formation of River Basin Organizations (RBOs) within each of 25 river basins nationwide, DWR sought to

²⁰⁷ Dr Apichart has a background as an engineering lecturer at the Asian Institute of Technology (AIT) in Bangkok, but went on to become a consultant on a series of foreign donor-funded water resources development projects and advisor to the Thai government, including having a seat on the National Water Resources Committee for many years. He has been intimately involved with Thai water resources management policy reform processes and is a vocal proponent of IWRM in his present position as President of the Thai Water Resources Association (TWRA), part of the Global Water Partnership.

influence the water resources development planning processes in each basin. In the case of the Nam Songkhram basin, it commissioned a consortium of Thai and Japanese engineering consultancies to conduct an “integrated” development master plan for the Basin (Sanyu Consultants (Thailand) Ltd et al., 2006). Unsurprisingly, given their core business, most of the solutions and recommendations proposed involved infrastructural development approaches, perhaps with the expectation that they would be first in line for a contract, especially given a proposal by the DWR to link the Nam Songkhram basin to a much larger trans-national and trans-basin water transfer project from Laos to Northeast Thailand (see Floch and Blake, 2011). Dr Apichart (interview, 4 June, 2012) expressed disillusionment that the DWR was attempting to build large-scale irrigation supply systems in the Northeast, even though it had relatively little practical experience of implementing this kind of development.

9.2.3 Hydraulic bureaucratic competition – Clash of the Titans?

“In their work, these two departments must compete with each other because they do the same kind of work. They must try to compete with each other in order to receive a budget.”

Source: Montree Chantawong, civil society activist, interviewed 19 November, 2009

Molle et al (2009d) note that the supremacy of RID in the Northeast was challenged as long ago as the 1970s by the rise of the DEDP, and that rivalries between hydrocracies are not uncommon. The intense competition between the US Army Corps of Engineers and the USBR in building dams in the western United States is a well documented example (Reisner, 1986). Despite water for irrigation being by far and away the largest consumptive use of water in Thailand, in 2001 being estimated at 90 % of the total (Azimi et al., 2001), the DWR has apparently had very little leverage over the irrigation sector since its formation, allowing the RID to essentially operate almost entirely autonomously of DWR’s mandate to direct and coordinate water resources management (Department of Water Resources, 2008). Above both institutions there is an apex body, the Office of National Water Resources Committee (ONWRC), but it has a modest record, being dominated by state officials

and lacking a legal status²⁰⁸. According to Molle (2007b:19), “the committee’s outreach is constrained by limited staff and resources, and its lack of power when dealing with long-established line agencies.” The RID, perhaps due to its institutional longevity²⁰⁹ and strong royal linkages, seems to consider itself the true heir and rightful executor of all public irrigation development nationwide and retains an unshakeable belief in its superior technical prowess to other agencies. By contrast, the DWR has not been able to establish itself as a genuine hydrocratic competitor to the far larger, wealthier, better staffed and firmly established RID, which operates with a far greater physical presence on the ground than any rival (refer to Appendix D for a critical comparison of the two agencies). Therefore, it is questionable whether the institutional space exists for two powerful hydrocracies fighting for control over the same resources. Wittfogel (1957:337) noted how “[I]n all types of hydraulic society the members of the ruling class competed for power, prestige and income”, but that the patterns of competition were different from those under capitalism and post-feudal societies. The keen rivalry between the two hydraulic bodies was palpable during interviews with officials in both agencies and close observers of the reform process.

For example, one senior civil servant directing the Thai National Mekong Committee (TNMC) Bureau of the DWR gave an opinion that RID’s aloofness was a function of its vastly superior annual budget, manpower and long-established technical capacity to construct and manage large scale hydraulic infrastructure. She sensed that there was little point in the DWR trying to compete with RID as another project constructor, especially at with large-scale projects.

“The RID doesn’t care about the Dept of Water Resources, they don’t care! They get granted a budget of many tens of thousands of million baht a year. They’re not interested because they are not under it..... The RID has much greater potential [*sakaya-phab*] than DWR. The potential of the DWR itself is far lower, because mostly it comes from ARD which was previously involved with small-scale water resources.”

²⁰⁸ The Draft Water Act, designed to reform the Thai water resources sector by separating policy, management and O & M functions, and provide legal status to RBOs to decentralize decision-making over water (Molle, 2007b) has been through multiple revisions by the National Water Resources Committee, since first proposed in 1991 (Interview with Hannarong Yaowalert, 4 January, 2010). It has essentially been in limbo over many years with little apparent appetite by bureaucrats or politicians to pass it into law.

²⁰⁹ The RID was established in 1903 and celebrated its 107th anniversary celebrations in June 2010 with an exhibition of its accomplishments at its Bangkok headquarters.

(Source: Pakawan Chofamane, TNMC representative, DWR. Interviewed 4 August 2010)

Pakawan gave the impression that the two agencies were gradually moving towards a situation of mutually agreed territorial control over the Northeast's water resources, where RID would assume control of the areas already classified as "irrigated" and DWR would settle for those parts of river basins in the non-irrigated areas and upland areas (classified as "watersheds"). Nevertheless, there are still vast areas of lowland agricultural land thought to be potentially irrigable, but not yet under state irrigation projects, and it is these areas that remain the subject of intense contestation for bureaucratic control. A senior RID official I interviewed was concerned by what he perceived as a patent conflict of interests on the part of the DWR, where it was acting as both a regulator and a developer simultaneously, and told me he much preferred the days of non-interference in RID's affairs prior to DWR's formation.

"The DWR have turned to developing water resources themselves, making small-scale water resources, such that this is not in accordance with their assigned duty, according to the law. If you are asking whether the RID has any problems with the DWR or not, actually I must mention that in the past, there were more than thirty departments that worked on water issues and we did not have any problems, because each party did different work. But the DWR is different from the thirty departments there used to be over seven years ago, because it has acted as if, 'I am the regulator, I will control you!'; while at the same time also doing construction itself. Do you understand? In some ways, they use the power of a regulator to interfere with the work of others. They use the fact they are an operator, to compete for development of construction work with other agencies."

(Source: Manas Gamnertmanee, Director of the People's Participation Promotion Office, RID, Bangkok. Interviewed 4 August, 2010).

I heard similar views expressed by other senior RID staff I interviewed in Khon Kaen, Nakhon Phanom and Sakon Nakhon during the course of fieldwork, confirming the impression that increasingly the two agencies are locked in a struggle over the same territory and this is leading to growing tensions, both locally and at the central governmental level. Reiterating Pakawan's point, Manas mentioned that RID's annual budget of some 40 billion baht (c. US\$ 1.25 billion) dwarfed that of the DWR's of a few billion baht, as if this was somehow proof of the absurdity that the subordinate agency (*nong*) should even consider challenging the seniority of its

vastly more experienced and wealthy elder brother (*pii*). He suggested that the best solution to the current problem was simply to remove any policy making and regulatory responsibility from the DWR's mandate and allow them to compete directly as another infrastructure developer (or “operator” in Manas's words). He suggested each agency would only be allowed to operate in clearly defined zones and so they would not interfere or overlap with the other's work, as in past times. In other words, supporting a return to the institutional status quo of a hierarchical hydraulic society, where there is only room for one dominant hydrocracy, with others playing a supporting role. Although the exact nature and outcome of this hydrocratic struggle is a matter of pure speculation, it is at present not “a clash of the titans”, as they do not appear to be on an equal footing.



Fig. 9.3 The front entrance to the Royal Irrigation Department's headquarters in central Bangkok, showing an image of the king over a reading of flow releases from its major dams

Fig. 9.4 A series of posters about national water resources management within the Department of Water Resources headquarters policy and planning division in Bangkok

9.2.4 Local expressions of the hydrocratic struggle

Rather ironically, given RID's existing plans for the Nam Songkhram Project (Chapter 8, Section 8.4), DWR has proposed that a large area of land in the Nam Songkhram Basin be irrigated via a pumped and piped water supply diverted from its planned trans-boundary diversion of water from the Nam Ngum River in Lao PDR (Blake et al., 2009). This DWR proposal appears to be substantially based on the

Biwater (1987) master plan for the Green Isaan Project, which estimated that 440,000 rai (70,400 ha) could be irrigated in the Nam Songkhram Basin, partly via a transbasin link from the Huay Luang dam and reservoir in Nong Khai province (see Floch et al., 2007). This sub-component was later slightly modified in the Khong-Chi-Mun and Water Grid projects²¹⁰, the latter including a component that planned to divert 65 m³/s of water from the Huay Luang Basin via pipelines and network of canals in the dry season, in a plan drawn up by Japanese engineering firm Sanyu Consultants (Thailand) Ltd (2006). This proposal was based on the simple assumption that water demand for irrigated agriculture would continue to grow into the future, irrespective of ongoing empirical trends regarding deagrarianization processes, such as rural out-migration and increasing labour scarcity (Floch and Molle, 2009a). The DWR also drew up plans to construct a series of large, on-floodplain, flood retention reservoirs in the Lower Nam Songkhram comprised of both private and common land, inspired by the king's "Monkey Cheeks" (*gaem ling*) reservoir principle. This advanced proposal, which I have seen in various internal DWR maps and reports, has not passed any consultation process with local stakeholders who would be impacted by these plans, as far as I am aware. In addition, there are already a large number of small-scale water storage projects in existence across the Lower Nam Songkhram Basin that would potentially be made redundant or destroyed by the larger projects, should either the hydrocracies' proposals advance to implementation.

9.3 Other state actors – bureaucracies

In addition to the dominant role played by the afore-mentioned line agencies in the execution of the hydraulic mission in the Nam Songkhram Basin, a number of other state actors may contribute to the mission, albeit with more modest resources at their disposal and a narrower mandate in water resources management. These have included the Department of Land Development (DLD), the Agricultural Land Reform Office (ALRO), the Department of Public Works, the Royal Forestry

²¹⁰ The Water Grid Project was promoted by the DWR as negating many of the problems earlier identified for the KCM project, by avoiding canal construction (which was portrayed as expensive in terms of compensation for land lost and disruptive to the environment) and replacing them with pipes.

Department (RFD), the Department of Disaster Prevention and Mitigation, the Provincial Administration Organizations (PAOs) of the four provinces, and the numerous Tambon Administration Organizations (TAOs). The irrigation projects these organizations have constructed have been on a more limited localized scale than the larger projects of the main hydrocracies. Additionally, the other agencies' irrigation projects often form just one component in general rural development objectives, but cumulatively their impact on the socio-economic land-waterscape should not be underestimated (Blake et al., 2009). They may be considered to be part of a broader discursive coalition of state interests that coalesce around hydraulic development paradigms and officials within them are generally supportive of the basic tenets of irrigationalism, although there may often be an element of competition amongst them in firstly securing central government budgets and secondly, ensuring they have secured physical sites and a compliant population to enact the development project on the ground. The latter task is becoming increasingly more challenging in the Northeast, as the river basins become progressively over-built, while local-local, local-state and intra-state agency conflicts over water have grown in frequency (Molle, 2008b; Floch and Molle, 2009b).

During the course of five decades of dedicated hydraulic development in the Nam Songkhram Basin, state agencies have already constructed almost every possible combination and permutation of irrigation technology. The field observations in the Nam Songkhram Basin mirrored findings made by Floch and Molle (2007) regarding the comprehensive range of technological options envisaged and (in some cases) implemented in the Northeast (see Fig 9.5). Wherever it is executed, the hydraulic mission has tended to follow the same relentless developmental logic that has become ever more divorced from any economic rationality, but follows its own internal discursive rationale that tends to defy easy characterization and explanation, allowing project failure to be piled on failure, impacts to be compounded, without ever being seriously challenged. No comprehensive independent evaluations of the regional irrigation sector have been carried out for years it seems²¹¹. Empirical evidence collected from the field tended to suggest that the only type of externally imposed public irrigation model that has persisted over a matter of decades, is the

²¹¹ Although not entirely independent, a number of quite thorough evaluations of the irrigation sector in Northeast Thailand were carried out by USAID-hired consultants in the 1970-1993 period, but since then there does not appear to have been any other reports.

top-down, centrally managed, large-scale gravity-fed irrigation schemes, of which there is only a single example, namely the Lam Nam Oon Irrigation Project. Such hydraulic agriculture projects are entirely subsidized by the RID for O & M costs and are tightly controlled from the core in Bangkok. However, like with other RID large-scale dams, demand for the system's water is gradually increasing from municipalities which require it for domestic tap water provision and users are prepared to pay a fee, signaling potential future inter-sectoral competition. By contrast, many small and medium-scale irrigation projects were found to be essentially abandoned and in an advanced state of disrepair. Private, household-level irrigation and hydroagriculture can be found in pockets all over the Northeast, where people are still willing to risk the vagaries of a semi-subsistence farming livelihood, without recourse to state subsidies.

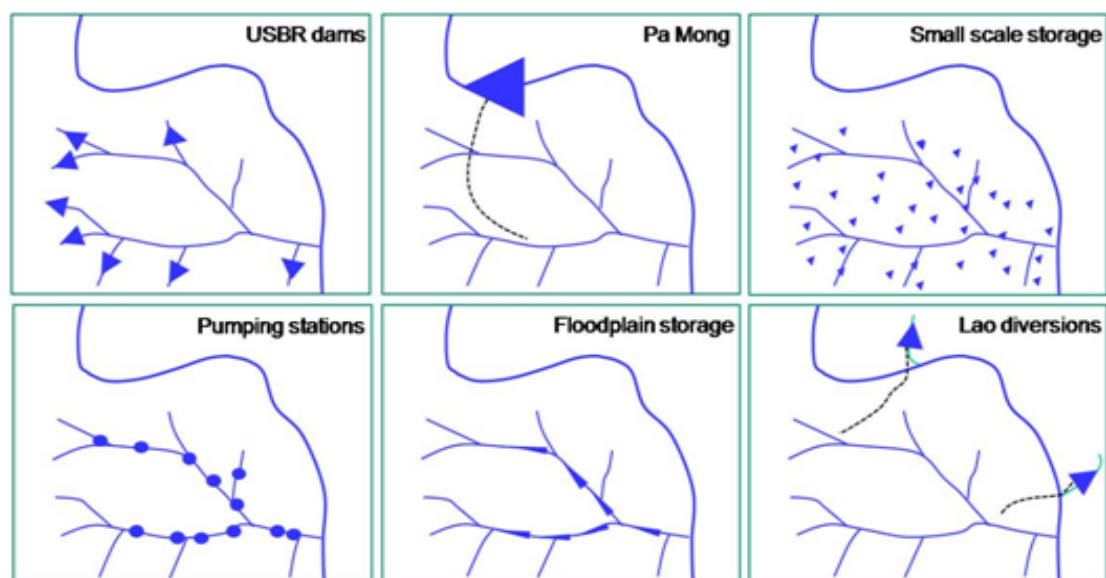


Fig 9.5 Diagram to illustrate the diversity of state-initiated water resources development options that have been proposed and/or implemented in the Northeast region over the last half century. NB: The Pa Mong dam option has been replaced by another dam proposal upstream at Pak Chong (Source: Molle et al., 2009a)

There are two other actor groups that lay outside the regular state bureaucratic structure and are not always clearly visible, so have tended to get overlooked in most critical analysis to date, but are still relevant to furthering the state's hydraulic mission in the Nam Songkhram Basin, namely the military and the monarchy. The first is the military, or more specifically the Royal Thai Army, which continues to be an extremely powerful institution within Thai politics at both national and regional levels and is also peripherally involved in promoting water resources development

pathways. In Chapter 7, the RTA's integral discursive and material role in promoting the Green Isaan Project were documented, and even though it has nominally stepped back from being a lead actor since then, its developmental influence can still be felt in the region. The RTA's involvement in controversial state forestry programmes such as the *Khor Jor Kor* project as a social control mechanism are also well documented (Pye, 2005). Through various divisions, it maintains an active developmental arm in Northeast provinces, especially in border areas or areas within old communist insurgency zones (so-called "Red Zones"), such as the Phu Phan hills. Thus, I was not surprised to learn that there was a small RTA development base in Phanna Nikhom of Sakon Nakhon that had approached village leaders and the TAO in Naa Hua Bor sub-district to seek their approval for a "dredging project" (*khlong-gan kut lawk*) to be implemented on nearby streams. The RTA commanders apparently had received a significant central government budget for "dredging" streams in Sakon Nakhon province²¹² and they were anxious to carry out the development projects before the end of the financial year.

The Ban Non Rua TAO representative, village head and *gamnan* seemed keen to allow the project to go ahead, believing it would bring benefits to the villagers by increasing water storage for agriculture. However, the village held a public hearing (*prachakom moo baan*) on 28 April 2010 to discuss the project in the temple at which I attended. It was attended by just nineteen persons (no women were present) and the *gamnan* explained that the RTA would *kut lawk* a natural stream running nearby the village, dredging a channel 30 m wide for a length of 8 kms. At first, the villagers were silent and did not dare oppose the supportive view of the *gamnan*, but then one villager spoke up and said he was worried that it would cause the loss of the riparian trees and vegetation, which were important sources of food for villagers. Another said the birds, fish, animals and bamboo shoots found along its course would disappear. There was a murmur of assent and suddenly there were several people speaking out against the project. At the end of the meeting a show of hands went up and the majority voted the project down. Perhaps this development project was rejected solely on social and environmental grounds and was an expression of participatory governance. Or alternatively, it can be read as a reaction against the

²¹² Although I have no confirmation, I suspect this budget was granted under the "Thai Khem Kaeng" economic stimulus programme.

military in general by a village with strong sympathies for the Red Shirt movement, with the general image of the RTA being particularly poor at that moment in time²¹³ and concern for the ecological integrity of the stream was just a convenient excuse to snub the military with an act of resistance?

The second quasi-state institution that I have only briefly mentioned so far and whose ubiquitous presence is often obscured or glossed over in most critical analysis of the water resources development, is the monarchy. I deal explicitly with the king and the monarchy's role in promoting the national hydraulic mission and irrigationalism in the next chapter. Local evidence of the monarchy's influence on the discourse and material practices was widespread, from the plethora of "Royally-Initiated Projects" of all types from small-scale storage dams and irrigation projects I encountered along the edge of the Phu Phan range (see Fig. 9.6), right up to the multi-million dollar Nam Gam Development Project nearby. The monarchy also maintains a physical presence locally in the Nam Songkhram Basin through Royal Development Study Centres, the Chaipattana Foundation, and various other Royal Development Projects implemented through the offices of various state agencies (refer to Chapter 10 for further detail). The monarch's symbolic presence is tangible in all the hydraulic bureaucracy offices I visited, most especially the RID where the king is revered like a demi-god, judging by the prolific and prominent iconic imagery used and in terms of adoption of royal prerogatives into the working language and practices of the agency. For example, I encountered direct appropriation by state agencies of the king's rhetoric (e.g. from birthday speeches) regarding recommended water resources development technology for the nation, such as *gaem ling* flood storage reservoirs; "*fai maew*" (small stream check-dams – see Fig. 9.7) built on upland watercourses to supposedly store water, recharge groundwater and regenerate the riparian forest (e.g. The National Identity Board, 2000); and other principles or inventions credited to the king.

²¹³ Of the three villages in which I conducted my fieldwork, Baan Non Rua was the most overt in its support of the "Red Shirt" movement, which in late April 2010 was locked in conflict with the government in Bangkok, with thousands of protesters occupying large parts of the central business district and demanding new national elections.



Fig 9.6 Unmaintained dam outlet structure at a RID built small-scale reservoir and irrigation scheme on the edge of the Phu Phan hills, classified as a "Royally-Initiated Project"

Fig 9.7 Nearly completed "*fai maew*", built by village labour on stream near to Baan Non Rua in July 2010. Within one month of this photo, the weir had washed away.

The final group of actors to mention that have played an ever diminishing role in determining material outcomes on the ground over time, are bilateral aid donors, development agencies (e.g. USAID, MRC), multilateral development banks (e.g. the ADB and World Bank) and international consultancy companies that have supported the Thai government in promoting irrigation development in the past. They were seminal in providing grants, loans, technical assistance and technology to the RID and other state agencies since dissolved, but in recent years the economic progress of Thailand and changing regional geo-politics has dictated an ever-diminishing role for external development agencies (so I will not dwell on them in detail). Perhaps the one exception has been technical assistance in formulating large-scale trans-boundary and trans-basin diversion schemes, such as the Nam Ngum Diversion project, but the World Bank and allied parties later withdrew their involvement following strong domestic and international criticism from civil society organizations (Middleton and Lee, 2007; Floch and Blake, 2011). Critics of the World Bank and ADB promoted Mekong Water Resources Assistance Strategy (MWRAS)²¹⁴, essentially called for improved and more inclusive regional water governance approaches and pointed to these projects as the antithesis of worldwide

²¹⁴ MWRAS was a short-lived attempt by these agencies to regain a degree of relevance in the fast-changing regional development milieu by promoting cross-border cooperation between Mekong nations in developing large-scale hydraulic infrastructure solutions to poverty.

trends towards greater openness, transparency, accountability, etc, narratives (Kakonen and Hirsch, 2009; Molle et al., 2009c; Dore and Lebel, 2010). The Japanese government also, through the Japanese Bank for International Cooperation (JBIC) and the Japanese International Cooperation Agency (JICA), has been particularly active in supporting the discourse of trans-basin diversion of water for irrigation between Laos and Thailand in the past (Floch and Blake, 2011), but their present level of involvement is unclear.

9.4 Strategic Groups

The theoretical concept of strategic groups in the context of Thailand and Vietnam was elaborated in Section 3.2.3 of Chapter 3, in which groups of actors (rather than individuals) compete for access to and control of resources, which are by definition scarce. Evers and Benedikter (2009a:420) argued that “the management and control of the flow of water, its use for irrigation, aquaculture, river transport or industry provide a bundle of resources to which actors strive for access.” The authors stress that the actors are not individuals, but social groups. The benefits derived often include monetary gain (profit), but in the Vietnamese Mekong Delta case of modern hydraulic society may also include non-material goals such as institutional change, improved social status, political power and honour. In Thailand, as with the case of Vietnam, the hydraulic bureaucracies remain the prevailing authority in the planning and management of irrigation and other hydraulic works, maintaining a system of control that is closely aligned with certain other narrow interests, lying outside of the immediate bureaucracy, partly agreeing with Eisenstadt’s (1958) critique of Wittfogel. Evers and Benedikter (2009a) stress that besides those in power that shape the political and economic framework of society, it is also possible to identify counter-strategic groups that try to oppose or challenge the powerful group. They admit that when studying the strategic groups, “a highly diverse and dynamic societal portrait appears, embracing water related businesses, hydraulic bureaucracies or even certain professions like hydraulic engineers” that interact or compete with each other in an “arena centered on water” (Evers and Benedikter, 2009a:420). This picture of complexity is no less true in Thailand than Vietnam.

9.5 The patrimonial politics of water resources development control

Developing the theme of power relations further for Thailand, given that the main hydrocracies are basically competitive in nature, rather than forge strategic alliances amongst themselves, they are more likely to form alliances with non-state actors, including politicians, development consultancies, construction companies, international development agencies and civil society organizations that are themselves incorporated into a strategic group network of complex relationships, operating at various levels of the socio-political hierarchy. In examining the role of powerful groups promoting irrigation development, a factor that tends to be overlooked in more structural analyses, is the critical role that individual actors may play in influencing processes and outcomes. This is especially pertinent to Southeast Asian nations where, “the politics of entourages and cliques, of personal networks and associations, are critical for the building of coherent national power structures” (Pye, 1985:27). Pye contends that even normally rigid hierarchical institutions such as national bureaucracies and military establishments “tend to be facades for pyramids of informal, but enduring, patron-client groupings”. Whilst a number of studies have examined the influence that paternalism and patrimonialism has had on the modern political development of Thailand (e.g. Jacobs, 1971; Rakwijt, 1971; Chaloeontiarana, 2007), there appear to have been relatively few recent studies conducted concerning tendencies towards autocratic paternalism, which in the view of Jacobs (1971), lies close to the heart of Thai social behaviour and state authority. He argued that Thailand provided a model of a patrimonial society, with “the patrimonial principle of superior appointers treating inferior appointees as members of a personal constituency, rewarded and punished on grace and by fiat, capriciously persists” (Jacobs, 1971:27).

The Thai model of patrimonialism is highly paternalistic, maintains Jacobs (1971), in that rulers are commonly viewed as father figures, from the king at the apex of society (as a *pho khun*) right down to village leaders (*pho baan* or *phu yai*), a social phenomenon that is primarily benevolent and autocratic in form, rather than

absolutist or despotic. Although, as Chaloeontiarana (2007) argues, there tends to be periodic returns to despotism, such as during Sarit's regime and later military junta-run governments during the 1960s and 70s. Jacobs (1971) maintained that arbitrary decision-making by superiors is not only accepted by subordinates, but actually expected, and thus authority tends to be unitary, rather than differentiated, dispersed or autonomous. Within the bureaucratic apparatus, it is the authority of those few at the apex of the hierarchy alone that is vital, prompting Jacobs (1971:28) to argue (in apparent support of Wittfogel's position), "effective opposition rarely arises beyond the summit of the political apparatus, and political change is characterized by palace coups rather than by major social upheavals involving ideological conflicts". But this analysis was written four decades ago, which begs the question whether such strongly patrimonial relationships persist to the present day²¹⁵?

London (1977) argued that decision-making power was still concentrated in the hands of a relatively small, Bangkok-based elite, drawn from within the ranks of a hierarchical bureaucratic polity essentially beholden to no outside agent for regulation and checks to its power. Above all else, the patrimonial system is seen to be closed and cyclical in nature, highly resilient to external change and so may periodically be modernized, but rarely qualitatively developed for as long as the existing hierarchy is securely maintained in place. Rigg (1991) has claimed that hierarchical and paternalistic patron-client relationships act as a basic inhibitor to the success of grass-roots development in Thailand, calling into question the "community-culture" discourse oriented strategy of many NGOs (cf. Nartsupha, 1991). In a more recent analysis of modern democratic development in Thailand, Ockey (2005) has argued that patron-clientelism is gradually weakening in Thailand as the country becomes more socio-politically pluralistic. But he noted, it was stronger in rural areas than urban areas and was "being shored up by institutional structures, particularly in the military and the bureaucracy, and, especially in rural areas, by generosity, often in the form of cash payments for participation in demonstrations or elections" (Ockey, 2005:8). Molle (2003:256), examining the case of the Chao Phraya Delta irrigation management politics, found that "MPs and other constituency representatives" wielded significant power to influence the allocation of

²¹⁵ This theme is explored in more detail in Chapter 10, considering the role of "The Father of Water Resources Management".

irrigation water, “as a way to act as patrons and gain political rewards in times of election”.

9.5.1 The role of paternalistic local leaders and patron-client relationships

To further understand the spatial dimensions of the politics of irrigation development, it is important not to overlook the local level and how power relations link across scale to the regional and national levels, rather than the conventional preoccupation with macro-level analyses. This suggests identifying some of the linkages between the “everyday politics of water resources management”, espoused by Mollinga (2008), as water control contestation shifts between and across different domains and scales. This could be loosely equated with Foucault’s micro politics of everyday life, where diverse plural centres, regimes of circulating power and discursive practices are viewed as linked (Layder, 2001). Antony Turton (1989b:66) argued that in understanding prevailing rural power relations of domination and subordination in contemporary Thai society, “the role of 'local powers' is crucially important: the local bureaucratic, commercial and 'developmental' beneficiaries of the state and state policies.” He noted an “array of central government policies and instruments for maintaining the status quo” designed to ensure uniformity of control and national stability (Turton, 1989b:67), although he did not consider the potential of water resources development to be an instrument of state control. Local powers are defined by Turton (1989a:93) as the “power blocs and coalitions which are seen as a crucial mediation, nexus, and localization of contradictions and conflicts between state and capitalist spheres on the one hand and the majority of rural producers on the other.” The rural majority in Thailand has an explicit importance to government and politicians in that they are sources of votes in times of election and are vital for achieving the centre’s ideological goals, such as the high priority “national security” or indeed, reproducing irrigationalism.

Recognition of the pork barreling aspects of irrigation projects is well documented in other contexts (Reisner, 1986; Worster, 1992) as a political tactic for coralling the votes of so-called “yeoman farmers” (Molle et al., 2009d), and has also been recognized for Thailand’s Northeast by Philip Hirsch in an interview for Australian

radio (Werden, 2008) and the Chao Phraya delta (Molle, 2003). The latter author noted that due to the scarcity of water relative to demand, “MPs and other constituencies representatives have long mediated requests for water as a way to act as patrons and gain political rewards in times of elections” (Molle and Srijantr, 2003:258). Likewise in the Northeast, rural voters are regarded by politicians as reservoirs of opportunity to be sequentially tapped and rewarded each election cycle (which can be frequent) for the access they provide to state funds²¹⁶, as explained by Bruns (1991:86):

“Irrigation projects are large and visible rewards that politicians can offer in exchange for support. Members of Parliament are active in lobbying RID for projects, at the request of their constituents. M.P.s and representatives in regional assemblies may be contractors themselves or have links to them and stand to gain from building projects funded by the Job Creation Program or Provincial Administration. At the national level there has been strong political pressure for construction of water resources projects. Construction represents a visible response to the problems of drought and poverty in the northeast.”

Understanding the role of local leaders, politicians, state officials and construction contractors, and the often mutually reinforcing links between them through both strategic groups and actor networks for securing and controlling the local water resources development paradigm, is crucial to an appreciation of everyday politics and practices of irrigationalism. To illustrate the vital role of local powers in initiating and mediating water resources development, I point to some anecdotal evidence gathered during fieldwork. The case studies examined in Chapter 8 have already identified some basic relationships between various actors involved in the projects and their constituents, which I now intend to further elaborate on by examining the case of Baan Naa Phiang, Sri Songkhram District.

It appeared the two most powerful people within the village during fieldwork were the present headman *phu yai* Somboon and his predecessor *pho yai* Sanguan, with both men nominally linked into a patronage network under the Nakon Phanom MP, Supachai Phosu. Supachai (nicknamed “Kru Gaew”) was born in a neighbouring

²¹⁶ In the questionnaire survey, a fairly high proportion of people across the locations agreed with the statement “politicians are able to win votes by policies that promise new irrigation systems to villagers”. Broken down by location, it was found that 58.6 % in Khon Kaen, 56.1 % in Bangkok and 46.3 % of people in the Nam Songkhram village agreed with the statement, with 41.7 % not sure in the latter location (see Table 11, Appendix C).

village, from the same ethnic group (*Nyaw*), was a distant relative of both men and shared the same surname, providing strong kinship links. However, following the Nong Saeng fiasco regarding the insensitive dumping of spoil, local conflict emerging and lack of reciprocal benefits being shared with the village (Chapter 8, Section 8.5), there was a sense amongst *phu yai* Somboon and his small entourage (including the Deputy Headmen) that they personally had been short changed by Supachai, as the person benefitting most from the DWR-funded project. They were not embarrassed to inform me that the standard financial skim from state infrastructure projects of this nature (including reservoirs, roads or weirs), was 30 % of the total contract value, which was normally split in fixed amounts amongst the interested parties, but rarely filtered down to the village elites, who were expected to be grateful for receiving the project and the credibility this supposedly engendered. The role of local elites and the nature of the patron-client relationship with Supachai over the Nam Songkhram Project were discussed in further detail in Section 8.4.5.

A village headperson, his or her deputies and the village TAO representatives will often form part of a clique of local leaders, that are usually bonded in a patron-client relationship with a district-level strongman politician, who in turn is linked in a dependent relationship with a provincial-level politician and so on up to the national level. To be elected as headman, *phu yai* Somboon and two Deputies had formed a team, relying on an entourage of supporters within the village (mostly kinship based) to canvas villagers for their votes. They had reportedly spent about 500,000 baht (c. US\$ 15,150) on their campaign²¹⁷, most of which was spent in the final month when the candidates were out and about almost daily to meet villagers and in the words of Boonpaeng, Somboon's deputy, "ready to buy whisky at every chance". Such competitive campaigning involving financial and other material inducements to the electorate was understood to be replicated during elections for the village TAO representative, the Provincial Administration Organization and general parliamentary elections, and has been critiqued as representing the epitome of Thailand's "money politics" (Laird, 2000; Ockey, 2005).

²¹⁷ A similar sum of money was reportedly spent by the successful candidate to secure the Headman position in Baan Nong Sa Pla, Moo 8, Udon Thani, where people admitted individual votes were bought for 500 baht (c. US\$ 15) each.

Phu Yai Somboon's team, disappointed by the lack of reciprocity displayed by MP Supachai over Nong Saeng, had already been approached by canvassers working for Itthipon Gaewboriboon (better known locally as "Gamnan Boy", a local *jao pho* businessman), the other local strongman in Sri Songkhram district who ran a rival political network to Supachai's, and seriously started to consider the pros and cons of defecting before the next general elections. One of the critical factors to consider would be what promises each patron could offer with regards to provision of more infrastructure projects, including water resources development, in return for delivering votes. The Baan Naa Phiang headman was considered to be in a strong position to bargain with a potential patron as the village offered relatively plentiful public land and streams for "development", something *pho yai* Sanguan had apparently been adept at negotiating. There was another potential advantage to switching loyalties to Gamnan Boy, in that the current Chairman of the Tha Bor Songkhram TAO was already in Gamnan Boy's *phak phuak*, and thus could help to channel more projects to the village.

A long-term civil rights and environmental activist who had been elected to the chairmanship of his local TAO in the Phu Phan hills, Laothai Nilnuan, explained to me in an interview how local politicians and government officials typically become embedded in political networks, that reproduce the malpractices common in general elections of vote buying and line agencies of institutionalized graft and rent seeking practices by budget skimming from infrastructure projects, a practice he reasoned had come at the expense of democracy and the ordinary citizen. The tensions and conflict that often arises between the elected executives and the permanent staff of the TAOs, especially the *Palad Or Bor Tor* (a legal executive position), who according to Garden et al (2010), have a tendency to stifle the ability of the Chairman and assembly to make decisions, due to their close relationship with the District Chief and Local Administration Department officials and a familiarity with the legal and administration system internally unavailable to the legislative branch. However, this intra-state official relationship needs to be set against the often close patron-client relationship the Chairman might enjoy with powerful local politician's networks, who often collude to insert projects in the TAO plan that are of personal benefit, especially roads and water resources development. Laothai explained the local

political networking system as mimicking the practices of money politics from the national level:

“Recently local politics has become connected to the national level; it is connected to the benefits; it is connected to the contractors; it is connected in using money to buy votes; it has become connected to the national political network system. The network works together to find things to consume [*haa kin*]. Therefore, they will do whatever earns them more “percentage” [*dai percent*], more money, rather than caring what the villagers actually need, as that would earn them less percent, less money, and so they never do it. With the exception of one TAO chairman, a local leader called Bamrung Kayotha²¹⁸ who is a good example and takes no personal benefits. He is not scared of anyone.....[laughs]....”

Source: Laothai Nilnuan, interviewed 15 December 2009

One morning in February 2010, I witnessed the practical mechanics of a village-level water resources development project planning process. With my research assistant, we encountered *phu yai* Somboon, deputy Boonpaeng and one of the village TAO councilors sitting at a table in front of Somboon’s house, completing a set of project application forms. The village leaders had been asked to hurriedly (within a day) submit an application request for up to four local water resources construction projects, with each project stipulated to be in the range of 150,000 – 250,000 baht (c. US\$ 4,545 – 7,576) and to be urgently implemented before the end of that dry season. The forms had to be submitted to the TAO Chairman, before being passed on to the District Chief and ultimately, the Deputy Governor of Nakhon Phanom Province for approval. The narrow timeframe given for the project proposal meant that there was no opportunity to consult the wider village, but this local elite troika took it upon themselves to decide where to locate the projects. There was no site visit, no quantification of soil volume to be moved, no estimation of costs or benefits, no consideration of environmental or social impacts or any other feasibility assessment undertaken – all four small barrage dam projects were written in a one-size fits all format within an hour and handed to the TAO representative to take into work that day. I suspect such is the manner in which most local level water resources development planning takes place across Thailand, as the villagers know from

²¹⁸ Bamrung Kayotha is a well-known Northeast farmers’ leader and civil society activist who was Secretary-General of the Small Scale Farmers Assembly of Isaan during the 1990s.

experience that the state agencies will execute the project according to its own designs in any event, as with Nong Saeng.

The discussion thus far has centred on the actors, strategic groups and discourse coalitions that have been influential in carrying out the hydraulic mission in the Nam Songkhram Basin over the last few decades. It has shown that some bureaucratic institutions are more powerful and hegemonic than others and since the bureaucratic reform of 2002, there has been growing competition and tension between the DWR and RID, with each courting a different political patronage network for legitimacy. The importance of paternalistic and patron-client politics, where individual actors and their relationships are crucial determinants of material outcomes is an enduring feature of Thai society, illustrated by upstream-downstream connections of actors and institutions linked to MP Supachai in Nakhon Phanom and the influence he has wielded in accelerating a provincial hydraulic development paradigm. Power and authority at the lower levels of the hydraulic hierarchy is not a given, but is constantly contested, much like the competition for control and legitimacy near the top of the hydraulic mission, such as that seen between the RID and the DWR (Molle et al., 2009d) or between Thaksin's network and the monarchist network (cf. McCargo, 2005). Thus it can be seen how national political conflicts can play out at the local level and vice versa – the two levels are not dichotomous but intimately connected arenas of political domination and struggles for resources.

9.6 Counter-strategic actors and groups

Not all people automatically endorse the state project of irrigationalism and there are inevitably certain actors and actor groups that have opposed and resisted the dominant discourse of the hydraulic mission to varying degrees and for different reasons, by advocating alternative narratives. Some of these have been discussed in relation to the Lam Nam Oon Irrigation Project and Nam Songkhram Projects in Chapter 8. Looking back to the period (late 1990s to early 2000s) when the Nam Songkhram Project was under the aegis of the DEDP, a broad coalition of actors and groups attempted to resist this and other regional large-scale water resources development projects. At that time, a relatively cohesive group of civil society

activists, grassroots movements and villager groups, university academics, media and indeed, some sections of the bureaucracy formed a loose coalition to oppose the irrigation project, portraying it as a major threat to the environment, local livelihoods and culture (see Section 8.4). Some of the counter-narratives and strategies adopted by civil society groups to resist large-scale state irrigation development projects are detailed in Floch and Blake (2011) and Blake et al. (2009), where opponents often express a belief that local ecological knowledge approaches to knowledge generation offer greater validity for understanding the complex human-nature relations than “scientific” tools favoured by state agencies in support of the project such as environmental and social impact assessments (EIAs and SIAs), illustrating the battlegrounds of knowledge and truth claims fought over hydraulic development paradigms in the Mekong Basin (Kakonen and Hirsch, 2009).

Part of the effectiveness of civil society organizations (such as the Project for Ecological Recovery and Towards Ecological Recovery and Regional Alliance (PER/TERRA)) opposition to such projects as the Nam Songkhram Project was adopting adaptive strategies to build informal alliances with local village leaders, supportive academics, and NGO activists to establish local grassroots networks and mobilize opposition through a variety of routes. Such strategic alliances proved successful in raising the profile of the Nam Songkhram River in the domestic media and rallying opposition to the Project at various regional and national public discussions (Lohmann, 1998). The DEDP usually responded to the criticisms of its decision-making process and shortcomings in its data, by just ordering more impact assessments from a different consultancy company. A repeated accusation aimed at project opponents by bureaucrats and politicians was that they were inhibiting regional “progress and development” by standing in its way, while in turn, the opponents pointed out that the proponents failed to take into account the project’s negative externalities and poor economical justification (Breukers, 1998).

Significantly, it should be recognized that this was not simply a state versus civil society discursive conflict, but a number of state agencies also expressed concerns about the Nam Songkhram Project through their role as regulatory agencies (i.e. the National Environment Board (NEB)), or policy-setting bodies such as the Office of Environmental Policy and Planning (OEPP) and its successor, the Office of Natural Resources and Environmental Policy and Planning (ONEP), under the reformed

Ministry of Natural Resources and Environment. These agencies were responsible for screening the EIA and other social and environmental safeguard documents required by Thai law to be submitted for large infrastructure projects prior to Cabinet approval of funding, and as such can constrain or enable the activities of hydrocracies. In the case of the Nam Songkhram Project, it appears there were sufficient doubts in OEPP about the project's stated costs and benefits to cause long delays in project progress through having to carry out new studies before approval by the NEB could be granted. The discursive battle for the Nam Songkhram Project dragged on for almost a decade prior to its rejection at the Cabinet level in 2002 (Blake et al., 2009). This demonstrates that the state should not be conceived as an undifferentiated and monolithic category, but needs to be understood as a diverse entity with multiple interests. But even the combined rhetorical objections of both state and non-state agencies could not undermine the *idea* of the project as a means to control drought and floods as natural disasters, nor the attractiveness of irrigationalism, so it was only a matter of time before it reappeared in a less transparent form, split into a series of smaller projects not required to undertake an EIA, under the black box guardianship of the RID.

Following the creation of the DWR, claiming a rhetorical adoption of Integrated Water Resources Management (IWRM) principles and a basin management approach through the establishment of river basin committees or organizations (RBOs), there was a degree of optimism amongst civil society actors opposed to the Nam Songkhram Project that this would lead to a reappraisal of the state's preoccupation with large-scale water resources development projects, as in theory, a wider set of voices would have a forum to discuss sustainable basin development options. However, the rhetorical adoption of integration, decentralization and participation narratives at the centre, did not lead to any discernible changes in overall approaches to development, according to civil society representatives I interviewed, who were unstintingly critical of the unfulfilled promise of the RBOs and reluctance of the central state to cede control of water resources to the periphery.

For example, Laothai Nilnuan, as a civil society representative for the Khong Basin²¹⁹ RBO (which incorporates the Nam Songkhram Basin) related that only a handful of non-state actors were members of each RBO and so their opinions were utterly marginalized against those of members from the hydrocracies²²⁰. He believed that this token presence of a few non-state players was a fig leaf to cover a lack of meaningful participation in a process specifically designed to approve the passage of water resources development projects. Because the RBOs are not empowered by national legislation to have any regulatory authority to alter or block projects, the RID and DWR can essentially ignore any individual objections to each agency's project plans and continue regardless in practice. Hence, he was not surprised to see the Nam Songkhram Project back on the table again. Laothai remarked:

“.....the power for [project] approval remains under the old structure - from the department level, the ministry level, the cabinet level - but not at the level of the RBOs.”

Source: Laothai Nilnuan, interviewed, 15 December 2009

I had fully expected to hear such critical views from civil society representatives about the centralization of authority, but I was quite surprised to hear almost identical perceptions about the lack of meaningful stakeholder participation and state authoritarianism driving project construction being expressed by Pakawan Chofamane as Director of the Thai National Mekong Committee (TNMC). She was scathing about the present water governance processes employed and thought the TNMC should play a bigger role in the Northeast's water resources planning process, but it too had been marginalized by more powerful political forces acting at a higher level. She identified this insincere approach to meaningful participation as a main source of opposition to the state's hydraulic mega-projects.

“When the government develops a large project, they don't think about these people. They just build it! Therefore, the TNMC should come and

²¹⁹ This is not a discrete river basin unit, but is rather a conglomeration of many smaller river basins draining into the Mekong River within the northern provinces of NE Thailand and bunched together in an arbitrary manner, rather defeating the idea of a river basin organization.

²²⁰ On 11 March 2010, I attended a Khong Basin RBC meeting as an observer, chaired by the Deputy Governor of Udon Thani, which appeared to be a theatrical exercise in rubber stamping literally hundreds of water resources construction projects valued at billions of baht in total, mostly proposed by DWR and RID. Only a handful of non-state representatives were present (8 out of roughly 50 persons), and space to ask questions was extremely constrained, yet the process was described as “integrated” and “participatory” in the documents provided to participants.

address this process. Can you picture it? Use the process to encourage thinking, encourage participation. They like to use the words ‘public participation’, but does it have any meaning or not? Even when the government wants to build a large project, they hire a consultancy company and the consultancy company holds a villager meeting and they tell them it will be like this or that. Then they call that the process. But it’s not actually participation. It’s just a process of announcement, that’s all. Just a process of telling them, ‘you should do this’, that’s all. So that’s why there’s always opposition.”

Source: Pakawan Chofamane, Director of the Bureau of the Thai National Mekong Committee, Department of Water Resources, Bangkok. Interviewed 4 August, 2010.

These points have provided a small selection of narratives raised by counter-strategic groups in opposition to large-scale water resources development projects, whether in the Nam Songkhram basin or elsewhere in Northeast Thailand. During the course of the research, it became apparent that most criticism of the Northeast’s hydraulic development paradigm has almost exclusively focused on the negative impacts and contested nature of large-scale development projects, such as the Nam Songkhram or KCM Projects. The implicit sub-text of this line of reasoning is that small or medium-scale projects are somehow more participatory, inclusive and socially/environmentally benign irrigation technologies than large-scale projects, and thus seem to escape criticism or opposition. Why might this be the case and is this position based on evidence? I provide below some brief perspectives to suggest that this “scale bias” may be related to the phenomenon of irrigationalism.

9.7 Scalar polarity, narrative fixity and water control

A lot of the recent debate concerning Northeastern irrigation development pathways has pivoted around questions of the scale appropriateness of hydraulic infrastructure development (i.e. large versus small-scale), technological issues (e.g. pumped or gravity-fed systems) and matters of governance (e.g. the degree and quality of “participation”). While widespread criticism has often been leveled by civil society actors towards a monolithic state unconcerned with the environmental and social impacts of large-scale water resources infrastructure projects, leading to many

instances of prolonged conflicts framed as state-local struggles (e.g. Foran and Manorum, 2009), few people appear to have examined the underlying logic of promoting small-scale and communally-based irrigation development approaches as an alternative development strategy or critically evaluated its record of success vis à vis large-scale irrigation technological interventions. This has perhaps not always been the case, but the debate around scale appears to have become polarized in the past two decades of almost exclusive domestic funding support for irrigation development. Sneddon (2003b) argued that proponents in the Thai government tended to employ different scalar narratives to justify the KCM Project than those more localist narratives used by social movements campaigning against it on social justice and environmental grounds.

Indeed, it might be said that there appeared to be a more active debate surrounding irrigation development pathways taking place a few decades ago, when foreign donor agencies were still providing substantial financial and technical support to Thai government agencies in the irrigation sector at all scales. Respective donor governments required a degree of external evaluation of the relative cost-benefits of such development assistance and commissioned occasional reviews of the sector. For example, a USAID report titled, *Thailand/USAID Irrigation Development Options and Investment Strategies for the 1980s*, noted that there was a “general awareness” that existing irrigation systems had “largely failed to deliver the planned for benefits” and pinned the blame chiefly on technical and managerial deficiencies such as “slow progress in completing on-farm distribution systems, difficulty in organizing water-user groups for effective water management, inadequate maintenance leading to deterioration of the systems, and insufficient market inducements to diversified and dry season cropping” (Keller et al., 1981:vi). Nearly all subsequent reports produced by USAID in the 1980s during a period of declining funding for the Thai irrigation sector, similarly concluded that the problem with system failure and low adoption lay with poor management and technical skills within the line agencies and water users, and if these could be addressed with instrumental measures, then irrigation performance would improve. According to a report by Tantuvanit et al (1988) quoting official data up to 1984, out of 15,000 tanks (i.e. reservoirs) and 10,000 weirs constructed, only 50 % were operable and being used. The factors given for this state of affairs was a lack of feeder canals to fields, a lack of maintenance,

failure to develop local farmer organizations “to enhance project viability” and a lack of basic knowledge by the farmers themselves about effective water utilization and system maintenance.

Even though such dynamics had been generally recognized by the donor community for some time, it was particularly telling that the last large donor-funded project to assist the RID in overcoming these constraints to irrigation system performance, still ended up spending fully 66 % of the entire budget on infrastructural items (e.g. buildings and roads, equipment and main system improvement), rather than through software items to overcome human and institutional constraints (Brolsma, 1996). This was despite the EU-financed project (titled the “Northeast Water Management and System Improvement Project”) having a stated main objective to “increase farmers’ net incomes on a sustainable basis” (Euroconsult and Minster Agriculture Ltd, 1998), it was apparent from the report’s subtext that the European technical advisors and their Thai counterparts were working at substantial cross-purposes (see quotation by Brolsma (1996) at the start of this present Chapter). Since the cessation of foreign aid to the Thai irrigation sector, there appears to have been minimal external evaluation apart from limited consultancies providing sectoral reform recommendations by FAO (e.g. Turrall, 2008). Perhaps there is critical independent evaluation of the national irrigation strategy being carried out by domestic actors and published in the Thai language, but I was not made aware of any if it exists. I am aware of one critical publication in Thai of RID’s activities published by the Project for Ecological Recovery (PER), which has had a notable history of critiquing state development approaches in water, forestry, land rights, energy and natural resources fields.

Most non-state actors and social science academics I interviewed professed to being rather skeptical of the top-down state model of promoting large-scale irrigation development. Past and present centrally planned, high cost, pan-regional development projects attracted the most criticism, as the antithesis of sustainable development. By comparison, there was a strong sense that small-scale projects had been more successful and it was the state’s reluctance to invest sufficiently at this scale that has led to the continued problems of water resources scarcity and resource-based conflicts. They advocated for state agencies to focus on developing small-scale, community-managed, participatory irrigation systems, premised it appeared on

reproducing utopian models of *muang fai*-type cooperative water management at the community level. Typifying this view was, Dr Prakob Wirojanagud, who believed small-scale irrigation development to be inherently superior to solving water resources problems for rural needs.

“..... small-scale projects, by their nature, help solve the problems and serve the basic needs of rural families. But if talking about water for large-scale agriculture or for the city, I agree that large scale water resources are more appropriate. Due to the greater number of villages and farming families in rural areas, if we don’t build small-scale water resources but decide to build medium- or large-scale projects, they would then serve only a minority.....Small scale projects serve the majority of poor people.”

Source: Dr Prakob Wirojanagud, President of Ubon Ratchatani University. Interviewed on 12 January, 2010.

A colleague of Dr Prakob repeated a commonly held perception that small, community-led irrigation schemes show superior performance on the grounds they represent an inherently more participatory technology, as reflected in these comments:

“Small-scale projects I think have performed well because of the issue of participation. People participate voluntarily. They volunteer themselves. They don’t have to wait to be told by the government what to do, but they know. They use simple technology. But the people have to support them too, like to provide some budget or give some information or some knowledge to maintain the scheme. So, participation is very important. With huge projects people do not participate. People just wait for the government to decide for them. This is not a good thing for water resources management.”

Source: Dr Kanokwan Manorom, Director of the Greater Mekong Sub-Region Social Research Centre (GMSSRC), Ubon Ratchatani University. Interviewed on 12 January, 2010.

The narratives purporting small-scale irrigation’s supposed superiority, at least morally if not technically, corresponds closely with a popular ideology amongst Thai civil society promoting an ideal form of communitarianism, widely referred to as “*watthanatham chumchon*” (see Nartsupha, 1991). Several studies have lauded community-based irrigation management systems in Northern Thailand, emphasizing such qualities as its efficiency, sustainability, equity, participation and adaptation of

traditional wisdom (e.g. Surarerks, 1986; Tan-Kim-Yong et al., 2005; Surarerks, 2006). Cultural beliefs in the benefits of communal irrigation are often linked with other normative notions in Thai rural life such as cooperative action, sharing of capital items, collective bargaining, community self-improvement and self-sufficiency that have become enshrined in civil society approaches to rural development and have been incorporated into the king's Sufficiency Economy principles (Falvey, 2000), thus gaining an indisputable air of authority and legitimacy, but with seemingly a limited basis in empiricism. Such descriptions have been criticized as rather static and tending to neglect the dynamics of such systems in different socio-political contexts over time (Neef et al., 2006). Mosse (2003:15) described a parallel phenomenon in southern India, maintaining, "small-scale surface tanks and water courses have provided fertile grounds for imaginative constructs of indigenous, local or community institutions, supportive of policy arguments within both environmentalist and devolution discourses." He pointed out how indigenous water harvesting systems had been captured by ideological and policy debates on the environment and state, whether couched in narratives of lost tradition or institutional economics. In Kenya, Adams (1990) found that scale of system was not a good indicator of system "success" with both large and small scale schemes performing badly, but the degree of bureaucratic control was far more important a determinant to outcome. These findings were corroborated in studies by Moris and Thom (1990) and Gujit and Thompson (1994), both of whom stress how irrigation development at whatever scale tends to be promoted as a panacea.

Despite popular perceptions amongst academic and civil society advocates, I also failed to find any documentary evidence to suggest that small-scale projects have performed any better than larger-scale projects. If anything, the performance of small-scale projects appears to be rather worse, on the basis data I obtained from the RID Provincial Office of Sakon Nakhon which indicated that in the 2009-10 dry season, only 0.99 % of irrigable land in the command area of all small-scale projects province-wide was actually being irrigated. I visited a selection of these scarcely used projects in Muang and Phanna Nikhom Districts (Appendix E) and found most were in a poor state of repair, both at the damsite and along water delivery infrastructure, with little evidence of regular maintenance by water users or RID (e.g. Fig 9.6). This can be compared to RID data provided for the Lam Nam Oon

Irrigation Project which indicated that 12.1 % of the irrigable area was being cultivated in the 2009-10 dry season. The occasional, isolated case of small-scale irrigation systems believed to be “sustainable” or “successful” was mentioned by one or two people during the course of fieldwork, but I was unable to visit these exceptions to assess their status. For example, Laothai Nilnuan, found just two operational weir irrigation systems in a detailed survey he conducted of irrigation infrastructure in a river basin adjacent to the Nam Songkhram in Sakon Nakhon province, and identified some of the reasons behind the high failure rate.

“Management of small and medium scale water resources from our study of over forty weirs in the Nam Phung basin, showed that the ability of the community to invest in maintenance of the weirs was insufficient. They didn’t have funds to maintain the weirs or hire people to open and close the gates, or other maintenance costs. The state just abandoned the water users groups and didn’t give them any support in water management. The state just constructed and then abandoned the weirs for the villagers to take care of by themselves. We saw that from more than forty dams, only two could be used in reality.”

Source: Laothai Nilnuan, Interviewed 15 December, 2009.

By the same token, neither did I find strong evidence to suggest that villagers themselves necessarily preferred small-scale projects over large-scale projects. Indeed, villagers responding to the questionnaire survey (see Table 11, Appendix 3) indicated that a high proportion were in favour of damming the Mekong to transfer water for irrigation into the Northeast²²¹, although notably fewer were keen with the idea of transferring water from Lao rivers. There was also majority agreement in Khon Kaen (57 %) and the Nam Songkhram village (65.2 %) with the statement, “the job of planning and managing water resources is more the job of the people than the government”, but in Bangkok people were less certain about this proposition, with 30.8 % disagreeing and 28 % not sure. The main point of this discussion is to suggest that irrigationalism is non scalar dependent, but is based on shared societal beliefs and values that communal-based irrigation development pathways are a superior default intervention for agricultural production pathways, which I argue is a cultural

²²¹ In Baan Nong Batao the questionnaire-based survey revealed that 69.5 % of respondents seemed to be in favour of the idea of transferring water from the Mekong River to irrigate Isaan, with only about 12 % not in favour of the idea.

phenomenon and constitutes an integral part of what the elite define as “Thai-ness”. For this reason it can also act relatively independently of rational or instrumental explanation, and allows development failure to be repeated over generations without serious reflection on the causes of that failure. And civil society actors can be as liable to seeing utopian futures in irrigation as their state counterparts. It could be that there may occasionally be no “right irrigation” (cf. Lankford, 2009) intervention above the household level in some contexts, if irrigation is exogenously derived and based more on ideological principles.

9.8 Summary

This chapter has further clarified the roles of some important state and non-state actors and the discursive processes to have emerged in the course of earlier chapters that are involved in the pursuit of the hydraulic mission. It has placed primary emphasis on the roles and relationships of the main hydraulic bureaucracies operating in the Northeast and considered some of the power relations and tensions between them as integral parts of the hydraulic state apparatus. Briefly considering the rise and demise of some past bureaucratic organizations now defunct (e.g. DEDP and ARD), it was shown that they were not truly agromanageial agencies (merely interested in construction) and so were eventually superceded by the truly agromanageial RID. However, the terrain of domination for the RID has been complicated since the establishment of the semi-regulatory DWR, which has threatened to remove some of the power and legitimacy enjoyed by the RID in recent years. By simultaneously attempting to regulate some areas of the RID’s domain of traditional control while also competing as another infrastructure construction agency in the same physical space as RID, there was palpable tension evident from officials interviewed in each. This situation of bureaucratic competition conforms with one of Wittfogel’s (1957) observations common in a hydraulic society. The potential prize for the dominant bureaucracy being less restricted access to the national treasury to continue unfettered with the hydraulic mission on one hand and unquestionable legitimacy conferred by patronage relations with the monarch at the apex, on the other. On present showing the RID is winning the two horse race on both counts, given its more established position and size, stronger royal patronage, and far

superior financial and political power it can draw upon; although this should not be an indicator of future status as the sands of Thai politics may shift.

The chapter has also illustrated the critical role played by other actors and actor groups allied to the hydrocracies that benefit from operationalizing irrigationalism. For example, construction businesses, consultancies, politicians, and local elites that form strategic alliances with either DWR or RID (but rarely both) in a web of mutual interests. It has provided some examples from fieldwork observations that highlight the importance of both patron-client relationships and paternalism in sustaining and reproducing the tenets of irrigationalism within Thai hydraulic society. Local leaders assist in mediating and determining local water resources development outcomes sometimes directly with state agencies, although more often in practice they are members of a competitive political clique under patron-wielding politicians, such as MP Supachai. Politicians fulfill a critical role in irrigation development practices as mediators between the local elite on one side, state bureaucracies at each level of governance on another and friendly contractors on the third. Politicians are often judged by their ability to deliver water resources development projects to a locality and are rewarded for their efforts through lucrative rent seeking opportunities from their central power broking role. The construction companies form yet another indivisible part of the strategic group formation in maintaining the hydraulic society's structure, as the state no longer undertakes all construction activities itself, as once was the case. Considering Brolsma's (1996) quote at the start of this chapter, it would appear that he failed to appreciate, or perhaps was reluctant to admit, from the perspective of the hydraulic bureaucracies and their strategic allies, irrigation development patently was a goal in itself. It provides their *raison d'être* and ideological prop - they could no more abandon this element of their existence than a multi-national corporation is likely to abandon capitalism.

Chapter 10 “The Father of Water Resources Management” – role of the monarch in controlling water resources development discourse

“The constructional, organizational, and acquisitive activities of hydraulic society tend to concentrate all authority in a directing center: the central government and ultimately the head of this government, the ruler..... Appearing as either a god or a descendant of a god, or as high priest, such a person is indeed a theocratic (divine) or quasitheocratical (pontifical) ruler.” Source: Wittfogel (1957:90)

10.1 Introduction

A core tenet of Wittfogel’s hydraulic society thesis was the existence of a totalitarian leader, a despot (Oriental or otherwise), sitting at the apex of an agro-managerial bureaucratic hierarchy, acting both as the chief ideologist and power broker of the state’s hydraulic apparatus. Based on the argument throughout this thesis that Thailand otherwise fits the fundamental profile of a modern day hydraulic society, then surely it would be worthwhile questioning whether such a powerful individual can be identified. Is there a Thai equivalent of the powerful ancient Chinese emperors, Sumerian kings, Angkorian kings or Egyptian pharaohs, but within the modern context of hydraulic development, control and statecraft? More specifically, does the present monarch, Bhumibol Adulyadej, fulfil any of the main characteristics identified by Wittfogel as an apex ruler of the hydraulic society? This question forms the basis of this chapter, and builds on the evidence presented in Chapter 5 and others that supports the notion of ideological explanations embodied in irrigationalism being a core driver of a state-centric irrigation development paradigm in Thai society. Earlier chapters have explored how the king’s symbolic, and occasionally material, influence is detectable at multiple scales in Thailand’s irrigation policy and practices, and how his name has repeatedly been symbolically

used to legitimise large numbers of infrastructure projects at multiple scales and thereby close debate, especially in the case of “Royally-Initiated Projects”.

This chapter explores the discursive and material aspects of the current monarch’s role in water resources development and management, taking a historically cognizant perspective to the regional context of Northeast Thailand. It begins by considering some of Wittfogel’s criteria for a hydraulic despot before taking a critical look at the reign of King Bhumibol, through the discourse surrounding his links and involvement with hydraulic development. It attempts to disentangle the nature of his authority, whether it is more material or symbolic, and then goes on to consider to what degree the king’s power can be regarded as despotic or absolute, or whether it is more hegemonic and benign in nature, where ideological or non-coercive aspects of statecraft are brought to the fore, taking into account temporal considerations over the course of his reign. As such, it partly addresses the following research questions:

SQ3: Which actors appear to determine control over irrigation development at multiple scales, using what discourses and pathways?

SQ6: How closely does Thailand fit Wittfogel’s characterization as an exemplar of a “hydraulic society” in the modern-day context? and, to a lesser extent;

10.2 Hydraulic society and tendency for the unchecked power of the supreme leader

Wittfogel (1957:27) maintained that in any hydraulic society, there would generally be a supreme leader whose power was absolute and played “the decisive role in initiating, accomplishing, and perpetuating the major works of hydraulic economy.” In considering the nature of the power of the ruler, Wittfogel described it as “total and not benevolent” and noted an absence of effective constitutional checks and societal checks on its absolutism (see Chapter 5). As a consequence of this tendency, the ruler will tend to “expand his authority through alliances, maneuvers, and ruthless schemes until, having conquered all other centers of supreme decision, he

alone prevails” (Wittfogel, 1957:107). Wittfogel also refers to the existence of an organizational web for managing the hydraulic works covering the whole of the nation, or at least its “dynamic core”. As a result, he posits, “those who control this network are uniquely prepared to wield supreme political power” (Wittfogel, 1957:27).

King Bhumibol Adulyadej, whose name literally translates as, “one who holds incomparable sway over the land” (Office of the National Water Resources Committee, 1996) has ruled Thailand for over six decades and stands as the longest reigning monarch in the world. Born in the United States of America and educated mostly in Switzerland²²², the king acquired the throne in June 1946 under mysterious circumstances, after his elder brother was shot and killed in the Grand Palace, Bangkok²²³. After returning to Europe to continue studies and careful grooming by court elders for the burdens of kingship, Bhumibol was crowned monarch in May 1950 (Handley, 2006). This was a particularly turbulent moment in Thai history when the nation was emerging from the chaos of World War Two and was aligning itself in a new world order of Cold War politics, while serious domestic internecine power struggles between authoritarian military strongmen and more liberal, democratic reformers were being waged (see Chapter 5, Section 5.3). Official biographies relate how Bhumibol was made acutely aware by palace advisors from an early stage in his reign of the vital importance of utilizing ritual symbolism, mysticism and religion in the job of ruling a deeply superstitious people (Stevenson, 2001).

In considering the role and impact of Bhumibol’s reign on the nation’s hydraulic development paradigm, I would begin with the observation that this aspect has been a relatively under-studied and poorly acknowledged element of statecraft and societal control in Thailand, and thus requires a historical and cultural perspective to make sense of the present socio-political milieu of development.

²²² Bhumibol initially studied engineering at University in Lausanne, but later switched to political science and law, but never actually completed his degree due to the demands of kingship.

²²³ There are various conspiracy theories regarding the cause of Ananda Mahidol’s death, ranging from accident to suicide to murder by one of several potential actors (Handley, 2006).

10.3 God King, Warrior King or “King of the Waters”?

As alluded to in Chapter 5 (Section 5.4), official state narratives often trace the deep reverence shown by the Thai people to the monarchy back to “the loving paternalistic nature” ascribed to the thirteenth century King Ramkhamhaeng, which has supposedly instilled an enduring “filial sense of respect and gratitude” amongst the citizenry to the royal institution (The National Identity Board, 2000). Such official accounts invariably stress the importance of superstitions and ancient religious beliefs surrounding the occult power of great Thai warrior kings that have been carried down through centuries of continuous benign monarchical rule (e.g. Tongyai, 1990). There is purportedly a lasting relationship between the Thai monarchs and divinity which has developed into “an established part of the national consciousness” (The National Identity Board, 2000). King Bhumibol’s cosmological roots claim inheritance from the Theravada Buddhist tradition of a virtuous *dhamma-raajaa*²²⁴ warrior-king on one hand, and from the Hindu-Brahman culture of kingship rooted in the Khmer Angkor tradition on the other, in which it is believed the sovereign was a living sacral *deva-raajaa*, or god-king (Handley, 2006). As former Prime Minister and royal ideologue, M.R. Kukrit Pramoj stated, “[T]he king must be both God and human. It is the burden of the king to consider where the dividing line between the two is....” (Pramoj (1983) cited in The National Identity Board, 2000). According to Fong (2009:688), “the syncretism of *devaraja* and *dhammaraja* with a relational view metaphorically expressed as between father and children, or *pho-luk*, constituted Thailand’s unwritten social contract between king and subjects.”

Theoretically, pre-1932 all Thai monarchs were considered absolute, with the king being considered the *phrachao paendin* (lord of the land) and *phrachao chiwit* (lord of life). The king ruled at the apex of a vast pyramidal structure of status relations, the *sakdinaa* system, where everyone occupied a position in relation to the king, and by extension, to each other (Ockey, 2005). However, argues Ockey (ibid.), outside

²²⁴ While some Thais may consider the king to embody sacred qualities as both pious *dhamma-raja* and semi-divine *deva-raajaa*, others perceive him more as a *sammuthithev*, a kind of “virtual deity”, rather than as an actual god (Connors, 2011)

the capital the *sakdinaa* system held less sway and more complex but less formal patterns of leadership were found. Generally speaking, the further one went from Bangkok, the greater the independence of local leaders. “In many places, the power of the absolute monarch meant little compared to the power of the local leader. In the tributary states, the king could only demand tribute, which was paid only intermittently, on threat of war (Ockey, 2005:4).

Bhumibol’s grandfather, King Chulalongkorn, one of the last absolute monarchs, has been recognized as a political reformist of the Thai bureaucracy and founding father of modern irrigation in Thailand. He granted a monopoly to the Siam Land, Canals and Irrigation Company to develop the Rangsit Project²²⁵ located to the north of Bangkok in the 1890s and permitted the establishment of an Irrigation Department (*Grom Khlong*) in 1903 (Falvey, 2000). Chulalongkorn was instrumental in identifying a need to develop an improved system of water management and irrigation in the Central Plains, notes Brummelhuis (2005), and invited a number of foreign advisers including a Dutchman (described as a “brilliant engineer”) to move to Siam in 1902 from the Dutch East Indies colonial regime, in order to overhaul the irrigation system in the service of the state. In a generally sympathetic treatment of Homan van der Heide’s²²⁶ mission, Brummelhuis treats the protagonist as an unsung hero ahead of his time, who fell victim to Machiavellian court politics and a lack of shared vision amongst the Siamese elite regarding the productive value of irrigation development. Chulalongkorn reputedly labelled van der Heide as “King of the Waters”²²⁷, for his decisive role in designing what was then referred to as simply “The Great Scheme”, but would later become the Lower Chao Phraya Delta Irrigation Scheme²²⁸. As mentioned in Chapter 4, by interpreting the hydraulic society theory as only referring to the construction of irrigation infrastructure, rather

²²⁵ Described as “the first comprehensive irrigation scheme”, this project involved the development of 1,600 kms of waterways and mechanized water control structures, followed by land drainage, development and sale for irrigated agriculture by the Company (*Borisat*) (Falvey, 2000).

²²⁶ Van der Heide, according to Brummelhuis (2007:2), was considered a pioneer of what later became known as the “ethical movement” in Dutch colonial history, which had as its slogan “emigration, irrigation and education”, and may be viewed as a moralistic social engineer with an unshakeable belief in “irrigation for progress”.

²²⁷ King Chulalongkorn is said to have once introduced van der Heide to a dinner guest with this title, interpreted as an ironical reference to his country of origin, which was popularly known in Siam as a land of water and the Dutch considered “landless buccaneers” (Brummelhuis, 2007:xiii).

²²⁸ This irrigation scheme was eventually constructed in the early 1950s with a World Bank loan. For a critical treatment of the historical outcome of this controversial project over the proceeding decades, refer to Molle (2003, 2007a)

than a range of protective and productive hydraulic works, Brummelhuis (2005) dismisses the hypothesis near the start of his book as “unsatisfactory” (p.13) and a “myth” (p.14) and thereby misses an opportunity to evaluate Siam as a potential hydraulic society and King Chulalongkorn as a budding hydraulic despot, on the basis of a more nuanced engagement.

By contrast, I would argue, a co-evolutionary process of elite nation-building began in earnest alongside securing hydraulic control of the core in the Chao Phraya delta under Chulalongkorn, but did not reach its zenith until well into the reign of Bhumibol. The present monarch has, on reflection, become a far more deserving recipient of the “King of the Waters” title than any individual before or since. Indeed, this was tacitly acknowledged in a recent hagiographic feature in the Thailand Tatler magazine about the present king’s brilliance in developing and managing Thailand’s waters, simply titled “The King of Water” (Ehrlich, 2011). The article timed to mark the occasion of his 84th birthday in December 2011, noted how he had dedicated a lifetime’s work to “seeking viable ways to prevent the vagaries of flood and drought spawned by the extremes of nature that are so prevalent in Southeast Asia”, and to celebrate his achievements in solving the nation’s water resources management problems, the king would “ceremonially inaugurate” five large-scale royally initiated projects under the RID.

I now proceed to consider some of the possible origins and evolution of Bhumibol’s interest in and dedication to hydraulic development through an analysis of some dominant societal narratives.

10.4 Role of the king in helping forge a national identity

“Some people wonder why I became interested in irrigation or forestry,’ His Majesty said in one of his speeches 30 years ago. ‘I remember that when I was 10 years old, a science teacher who is now dead taught me about soil conservation. We had to write: “There must be forest on the mountain or the rain will erode the soil and damage the mountain surface.” This is a fundamental fact of soil and forest conservation and of irrigation. If we fail to maintain the highland forest, we will have problems ranging from soil erosion to

sedimentation in dams and in rivers. Both can lead to floods. I have understood these relationships since I was 10.”

(Source: Bangkok Post 19 May, 2006

<http://www.bangkokpost.com/60yrsthron/saviour/index.html>

Accessed 20 October 2011)

In this section, I introduce the role of the Thai king as a key actor with direct agency to command on one hand, yet at the same time, just one amongst several powerful actors occupying the upper strata of a strongly hierarchical social structure that benefits from the maintenance of hydraulic society and state promotion of irrigationalism. I present an argument that suggests King Bhumibol has consistently been at the forefront of constructing and sustaining a potent irrigation development ideology in Thailand, which combines of discursive and material strategies. In the process, his agency has had a discernible impact on the material shape and outcomes of local, regional and national irrigation development. Simultaneously I acknowledge that such transformation cannot be achieved alone, and thus go on to examine some of the other actors and actor groups that have forged strategic alliances with the monarchy, such as the military, hydraulic bureaucracies, international development agencies, royalist and paramilitary groups, elements of civil society and various private sector companies involved in promoting the irrigation development paradigm (see Section 10.10 on network monarchy for further elaboration). I begin by examining the early period of the king's reign and rise to power with relation to water resources development, in particular the role of an early close mentor and ally in moulding future narratives, namely the despotic and paternalistic military dictator Field Marshall Sarit Thanarat (refer to Chapter 5, Section 5.3).

As noted already, Sarit played an instrumental role after the 1957 coup in helping to strengthen the legitimacy of a monarchy weakened by the toppling of the absolute monarchy in 1932 (Baker and Phongpaichit, 2005). Sarit's restoration and re-glorification of the monarchy as a semi-divine, “development king” was reciprocal, providing the dictator legitimacy in return, important given his lack of an electoral or popular mandate (Fong, 2009). By emphasizing the real and imagined achievements of Thailand's past monarchs and re-establishing conservative definitions of Thai identity and conservative political structures, Jackson (2002:167) argued that both

military regimes and political parties sympathetic to the military found, “the manipulation of the symbolism which historically surrounded and supported the absolute monarchy to provide a convenient basis for the centralized and autocratic exercise of political power.”

While most past academic attention has focused on the role of the monarchy as an apex institution in Thai society, a presently limited (but growing) body of literature has specifically spotlighted the role of King Bhumibol as the defining political actor instrumental in reviving its fortunes to a position unimaginable in 1950 (both figuratively and literally²²⁹) (e.g. McCargo, 2005; Handley, 2006; Ivarsson and Isager, 2010; Connors, 2011). Fong (2009), for example, argues that the staying power of the present king through six decades of tumultuous political crises and socio-economic transformation can only be properly understood by moving away from stagist views of historical development with simplistic binaries and instead identifying cultural themes and practices of nation construction. He argues that King Bhumibol should be conceptualized as a “dedicated and committed nationalist”, who through masterful modesty and political entrepreneurship managed to accommodate the military strongmen, “to bureaucratize and institutionalize royalism without ever abandoning his trump card: the capacity to work with royalists to generate mysticism, aura and most importantly a primordial connection to a glorified history that would have remained elegiac” (Fong, 2009:680). Hence, in this interpretation, great emphasis is accorded the king’s individual agency in forging national identity and nationhood identified earlier in Chapter 5. Critical to constructing a Thai national identity was the idea that Thailand was at heart an agricultural nation of self-sufficient and contented agriculturalists (see Chapter 5, Section 5.3.1). This worldview incorporated community-managed irrigation schemes as the default water management strategy of farmers, throughout the kingdom. Promoting a mythical united notion of “Thai-ness” in agriculture was essential to securing kingship, as much as any other form of statecraft, argued Falvey (2000).

²²⁹ A 2011 report for Forbes magazine stated that King Bhumibol is the richest monarch in the world by a comfortable margin, having assets in excess of US\$ 30 billion, mostly acquired through the Crown Property Bureau (Montlake, 2012).

10.4.1 Becoming a “Development King”

To recognize his development achievements, the king has been awarded an impressive array of titles, academic degrees²³⁰ and awards during his reign, several relating to agriculture and water resources management, both at home and abroad (see Table 10.1 below). These are interpreted in official narratives as concrete manifestations and affirmation of his superior abilities, leadership and inventiveness. For instance, he was presented the FAO Agricola Medal for his “dedication and devotion to the progress of the agricultural development of Thailand, which is also beneficial to the world” (The Public Relations Department, 2000:85). The medal portrays images of the king instructing villagers in crop growing on one side and the king with a map under his arm and camera around his neck; an iconic image closely associated in the Thai psyche with frequent trips to the countryside to direct irrigation development and also features on the highest value 1,000 baht banknote, in which he stares down benevolently at the Pasak Cholasit dam (see Fig. 10.1 and 10.2 and Section 10.9).



Fig. 10.1 (left) The king on the reverse of a thousand baht note overlooking a stylized picture of the Pasak Cholasit Dam in Central Thailand, a project he strongly advocated for.



Fig 10.2 (right) 50 Baht coin struck to commemorate the awarding of the FAO Agricola Medal to the king in 1996

²³⁰ In 1997, the palace revealed that the king has 136 honorary degrees, an unsurpassed record. This was prior to being awarded ten honorary doctorates from Kasetsart University alone, mentions Handley (2006)

Bhumibol has sometimes been referred to as “the guiding light of development” for his vision in promoting national development throughout his reign (The Public Relations Department, 2000) and credited with personally saving it from the worst affects of the 1997 Asian economic crash by his “new theory” of economic self-reliance. As if to reconfirm the official narrative that the king has been the principle helmsman behind progress and success in Thai water resources development and management, in 2008 the Ministry of Natural Resources and Environment displayed a pavilion at the Expo Zaragoza in Spain with the theme, “Water is Life - Royal Initiatives”. The Thai pavilion’s objective, according to the Department of Water Resources, was “to disseminate His Majesty the King’s brilliant initiatives for Thai way of life, culture, tradition, as well as innovation for sustainable water resources management to the international sight” (Department of Water Resources, 2008).

Title of Award	Awarding Organization	Date of award
Ramon Magsaysay Award for International Understanding – work of the Royal Projects	Ramon Magsaysay Award Foundation	August 1988
UNEP Gold Medal of Distinction – for contributions to the environment and nature conservation	The United Nations Environment Programme	November 1992
Agricola Medal - for services to agriculture and rural development	The Food and Agriculture Organization of the United Nations (FAO)	December 1995
International Rice Award Medal - in recognition of “passionate and personal interest in and devotion to the well-being of rice farmers and consumers”	The International Rice Research Institute	June 1996
Award presented in recognition of his “strong support for meteorology and operational hydrology”	The World Meteorological Organization	February 1997
Telefood Medal – in recognition of his “dedication to Thailand’s agricultural development, with the aim of raising the farmers’ standard of living and establishing food security”	FAO	December 1999
Golden Ear of Paddy – commemorating outstanding leadership in rural development	Asia-Pacific Rural and Agricultural Credit Association	May 2005
UNDP Lifetime Achievement Award – recognition of “the global relevance of his call for a sufficiency approach to development”	The United Nations Development Programme	May 2006
Dr Norman E. Borlaug Medallion – in recognition of his “outstanding humanitarian service in alleviating starvation and poverty	World Food Prize Foundation	July 2007

Source: (Thaiways Magazine, 2011)

Table 10.1 A selection of honours and awards presented to King Bhumibol, in recognition of his contributions to agriculture, rural development and water resources management

In addition to these international awards, domestically too he has been given a number of honourific titles for his contributions and services to national water resources development, the most apposite of which are outlined in the following sections.

10.4.2 The Great Engineer

“During more than 50 years of his reign, His Majesty has been concerned with his people’s ‘suffering’, thoroughly understood its ‘cause’ [sic], devised the method to minimise their suffering and guided the government agencies involved to implement the way to the cessation of their suffering..... Though His Majesty’s social contributions have been selectively praised in this book, the Engineering Institute of Thailand extremely hopes that it will remind all fellow ‘engineers’ of the country of their commitment to carry out His Majesty’s resolution and will show their gratitude towards His Majesty compassion to ‘cease the Thai people’s suffering’.”

Source: (Kiattikomol, 2000:10)

A major part of the “cause” of people’s “suffering”, according to the royal discourse, is the impacts that “natural disasters” like drought and floods have on the livelihood and wellbeing of the populace, which he believes are the principal water resources management problems afflicting Thailand. As stressed in Chapters 5 and 6, this causal link is repeated so often in state-sponsored publications and media reports that it has become a standard article of faith in the wider national development discourse. Not only is the king portrayed as intimately understanding *a priori* the causes of environmental degradation, poverty and suffering (see quote at start of Section 10.4), but he also understands the best solutions and, more impressively, possesses a gift for inventing methods for the minimization and even, eliminating his people’s suffering through magico-divinity means (Jackson, 2010). Indeed, the same Engineering Institute of Thailand sponsored publication quoted above, identifying the king as a “fellow engineer”, reverently notes:

“The engineering and Buddhist Noble Truths are integrated in the concept to develop the country in the right direction.” (Kiattikomol, 2000:23)

During the course of his reign the king has been feted for making several important technological contributions to the field of water resources management, some of which are recognized in the awards in Table 10.1. He has been praised domestically for inventing or adapting a number of technologies associated with improved water resources management (The Public Relations Department, 2000), including a mechanical water aeration device for pollution mitigation, an artificial rainmaking technique (see Section 10.4.3), small check dams for use in upland water streams, fog traps for irrigation at high altitudes, a massive flood control system for Bangkok, floodplain storage reservoirs for flood management (the “*gaem ling*” or “Monkey Cheeks” concept) and various bio-engineering techniques (e.g. vetiver grass for erosion control and water hyacinth²³¹ for wastewater control in Bangkok’s canals). The first of these royal inventions was a paddle wheel aerator (named the Chaipattana Aerator²³²) for use in de-oxygenated waterways and densely stocked fish ponds that the king claims a patent for (The National Identity Board, 2000).

While the king is often associated with the promotion of small-scale solutions to local water resources problems such as mechanical and biological wastewater treatment methods or building small “check dams” (“*fai maew*”) based on supposedly indigenous designs of highland ethnic groups²³³ (Ministry of Foreign Affairs, 2006), this association with promoting small-scale infrastructure is a relatively new construction (since the rise of his Sufficiency Economy philosophy) and in the past he showed a greater affinity to advocating large-scale hydraulic infrastructural solutions to Thailand’s water woes. Despite the adoption of a recent rhetoric promoting internationally popular developmental terms such as “sufficiency economy”, “sustainable”, “participatory”, “community-based” and “locally appropriate” approaches, the king has rarely shied away in the past from vocally supporting large-scale, state-led projects, such as the Bachoh and Pak Phanang

²³¹ The king likened the non-native water hyacinth to a “*bandit fighting bandit*”, due to its ability to absorb heavy metals out of polluted waters (National Identity Board, 2000). Unfortunately, these plants have now become a serious invasive pest species and the government spends large budgets annually in trying to eradicate it from waterways.

²³² The Chaipattana Aerator received a patent in Thailand in February 1995 that credits the king as its inventor.

²³³ I found these weirs or “*fai maew*” being built in large numbers in the Nam Songkhram Basin during fieldwork, often in totally unsuitable locations for the technology (Fig. 9.7). It seemed the underlying rationale had more to do with distributing money and favour to local elites (i.e. “gifting”) than seriously addressing water scarcity issues. Through association of this technology with the king, and its “local scale”, it was unlikely anyone would dare question the logic of the exercise.

schemes in the South; the Pasak Cholasit and Tha Dan schemes in the Central Plains; the Khwae Noi Project in the North; and the Green Isaan and Nam Gam projects in the Northeast, suggesting an earlier fascination with hydraulic engineering gigantism. Supporting this view, Handley (2006:366) reports that a Thai environmentalist he interviewed commented, “[T]he king represents the mentality of a conventional engineer: You can conquer nature and you should do so.”

10.4.3 The Royal Rainmaker

Having identified water scarcity resulting from “uncertain rainfall” leading to suppressed agricultural productivity being the principal obstacle besetting Thailand’s farming sector, the king reportedly developed an interest in “the science and technology” of generating artificial rain (The National Identity Board, 2000). An official narrative suggests that his fascination dates back to the mid-1950s, during charitable giving trips to more remote parts of the country where he met devoted subjects, studied their living conditions, promoted national unity and identified development projects for later implementation:

“Early in his reign, His Majesty the King became interested in artificial rainmaking to assist farmers, who are very dependent on rainwater for their cultivation. At this point, he began to study artificial rainmaking techniques to seek ways of bringing down more rain to ease the drought situation. He read research work on meteorology and weather modification, which he found useful for combating weather change. In 1955, when His Majesty visited northeastern provinces, he travelled from Nakhon Phanom to Kalasin, passing through Sakon Nakhon and the Phuphan mountain range. During the trip, he looked at the sky and saw a large number of clouds moving over the vast, arid area of the Northeast. The initial conception arose from his observation that there was no rain despite heavy cloudiness. He wondered how to make the clouds move down and turn into rain.”

(Source: Foreign Office. The Government Public Relations Department Office website: <http://thailand.prd.go.th/ebook/king/father.html> Accessed 8 March, 2012)

There seems to have been a considerable delay between making these initial observations in the Northeast and any concrete action being taken. A government

document relates that the king later, “ordered M.R. Debriddhi Devakul, an expert in agricultural engineering of the Ministry of Agriculture and Cooperatives, to conduct research”, which resulted in the establishment of an “Artificial Rain Research and Experiment Project” and an initial artificial rain experiment being conducted in Pak Chong District, Nakhon Ratchasima province in July 1969 (Ministry of Agriculture and Cooperatives, No date). The king is often presented as the driving force behind the technological breakthroughs that helped foster an enduring image of his scientific expertise in directing rainfall to areas of greatest scarcity (The National Identity Board, 2000). Reports tend to stress the king’s personal agency, in taking control of the rainmaking project (rather than credit the efforts of state officials or foreign advisors) as evidenced in the following account:

“The early experiments faced quite a number of constraints because the science of artificial rainmaking was new. It was a big task and there were neither experts nor scientists in the field of atmospheric modification. The King made the experiments by himself, and he also gave his personal funds to support the project.....By 1969, the King had discovered how to make rain, using non-toxic chemicals. As important, he discovered how to divert the rain to the required directions and bodies of water, such as reservoirs, lagoons, lakes and canals. This success has become the hope and the security of the farmers during the times of drought.”

(The Public Relations Department, 2000:77)

Paul Handley (2006) notes that in October 1972, the king invited a delegation of foreign diplomats to directly observe artificial rainmaking activities in Petchburi province²³⁴. Not long after, the rather bland sounding “artificial rain” terminology was upgraded in official accounts to the more regal “Royal Rain” (*fon luang*), thus leaving little doubt about the source of the kingdom’s fertility. In 1975, the king is reported to have established a “Royal Rain-Making Office” under the supervision of the Permanent Secretary to the Ministry of Agriculture and Cooperatives (Ministry of Agriculture and Cooperatives, No date). Another account reports how he worked

²³⁴ This public relations exercise was not dissimilar to one over a century earlier, when in 1868 King Rama IV invited European diplomats from as far away as Singapore to witness a solar eclipse he had predicted on the coast of Prachuap Khiri Khan province, as a demonstration of his astronomic prowess.

closely with research institutes and military missile experts to build experimental artificial rain rockets²³⁵ (The Public Relations Department, 2000).

The king's apparent enthusiasm for artificial rainmaking has remained undiminished throughout his reign. In 1999, the king was reported to have "discovered" a novel technique for achieving greater cloud density and increasing the extent of rainfall. The king named the new cloud-seeding method the "Super Sandwich" technique²³⁶, which has reputedly been recognized worldwide to make Thailand "the centre of tropical rainmaking activities in this region" (Thaiways Magazine, 2011). The same article described the king as being "eulogized" as the "Father of Royal Rainmaking" for outstanding success in solving water shortage problems and increasing agricultural production through the application of his patented rainmaking techniques. The economic cost-benefit ratio of the rainmaking operations is less clear²³⁷, however, as it has been steadily bureaucratized and become a routine part of the Ministry of Agriculture and Cooperatives' and Ministry of Defence's work, albeit wrapped in a cloak of royal secrecy. In recent years fighting the silent natural enemy (see Chapter 6, Section 6.4) has become a matter of such grave national concern that it has even necessitated the deployment of Royal Thai Air Force fighter jets in cloud-seeding efforts when drought strikes²³⁸ (Anonymous, 2009). The following quote from an Asian Times article, suggested that the national annual costs of this exercise amounted to over £19 million²³⁹ at the time, but the financial benefits remained obscure:

"Over the past month, 10 new sub-stations also have been established to help with cloud-seeding operations. They are temporary bases and will cease operation once the drought is under control, said Prinya Sudhikoses, with the Agriculture Ministry's Bureau of Royal

²³⁵ The language employed for artificial rainmaking is reminiscent of military warfare, such as the three distinct stages of the process described as follows: Stage 1 – Agitation; Stage 2 – Enlargement; Stage 3 - Attack (Ministry of Agriculture and Cooperatives, 2007?)

²³⁶ One of the favoured aircraft used for the cloud seeding operation was reported to be a "Super King Air 350" model (The National Identity Board, 2000).

²³⁷ The king has reportedly taken the view that cost-benefit analysis and quantifying the economic rate of returns are less important measures of success than any social benefits that accrue from the heavily subsidized projects, maintains Handley (2006).

²³⁸ The king was reported to have made another military analogy in a speech given at Chitralada Palace on 30 July, 1986, when he stated: "*Rainmaking is like a warship; you fire the missile far, then close in order to properly hit the target. Since we have facilities for rainmaking, we should be sure to use it properly to get rain in the right places*" (The National Identity Board, 2000:275).

²³⁹ This figure is based on an assumed exchange rate of 50.1 THB to one GB £. Table 10.2 suggests that the total annual budget allocated for making "Royal Rain" may have nearly doubled since.

Rainmaking and Agricultural Aviation. Cloud seeding, however, will continue throughout the year. Rainmaking operations occur every year in line with the rainmaking department's annual operations plan, the budget for which is set at about 1 billion baht (\$25 million).” (Source: Schonhardt (2005))

While the king is carefully portrayed to utilize the latest science and technology in the fight against drought and floods, he is simultaneously presented as being adept at drawing on traditional mythology and quasi-divine powers in understanding and influencing Thailand’s weather patterns. For example, in his 1995 birthday speech broadcast nationwide, he said he was able to predict the course of a typhoon earlier that year which meteorologists had said would hit Thailand directly, but in the end skirted by harmlessly. The king claimed to know better than the professional scientists the typhoon’s path due to consulting with “Mani Mekhala”²⁴⁰, which he explained was, “a weather forecast office which has its headquarters on Mount Sumeru” and he requested divine intervention from the deity that was duly granted, saving the nation from a terrible deluge (Handley, 2006:390).

It is apparent that both the palace and the wider state public relations machine has recognized the immeasurable propaganda value to be derived from promoting the artificial rainmaking narrative to its fullest extent, combining the potent gifts of a scientifically astute monarch who is also privy to ancient knowledge and mysterious powers. The “Royal Rainmaker” moniker and attendant imagery beamed by television into every home, has been an invaluable ideological device in enabling a royally-legitimated state command over the skies and weather (as well as water on the ground), to bring hope and succour to the rural masses painted as being at the mercy of the elements. No other political competitor could hope to match the state’s extensive public relations machine devoted to maximising what Wittfogel (1957:133) termed the “rulers’ publicity optimum” in shaping public opinion favourably to accepting the monarch’s utter benevolence in such matters, which reaches its peak in the next title.

²⁴⁰ Mekhala, a folklore goddess of the seas in Indic mythology, perhaps coincidentally, was the name adopted for a national water resources “operations centre” run by the Department of Water Resources, designed in principle to be a hub that coordinates activities with other water-related agencies.

10.4.4 The Father of Water Resources Management

The honorific title that perhaps best encapsulates the exalted position in which King Bhumibol is held for his skills in hydrological management, was the accolade presented on the occasion of his 50th year on the throne, by the then Prime Minister, Banharn Silpa-Archa. He was awarded the title of “Father of Water Resources Management” in recognition of his long and significant contribution to national water resources development. In the presentation speech, Banharn drew strongly on the king’s superior problem identification framework, in a process of glorification:

“Your Majesty’s interest in water is not only limited to help lessening the water shortage problem to ease the hardship of people, but also to maintain the quality and quantity of water in balance, a crucial factor for human survival. Management includes draining water from low-lying areas where floods stagnated, flood protection and mitigation, as well as waste water treatment. In our humble recognition of Your Majesty’s Kindness and Competence on water resources development and management, I, on behalf of the Royal Thai Government and all the Thai people, beg for your gracious permission to offer to Your Majesty the epithet of ‘The Father of Water Resources Management’”

(Ministry of Agriculture and Cooperatives, No date:135)

This overtly patrimonial title has been frequently employed since to strengthen a narrative equating the king with meta-physical prowess in managing and developing water resources. A decade later on the 60th anniversary of the king’s reign, a rash of publications were released celebrating the king’s achievements in rural development, many of them referring to him as “The Father of Water Resources Management”. His reputation as a near-genius inventor, practical sage and benevolent father figure in the field of agricultural water resources management and hydraulic control was elevated still further. Wittfogel is said to have noted, according to Fong (2009:680) that patrimonial society is “not so much a stage in a universal, linear theory of social evolution but one that is its own agent of historical unfolding over time”. The multiple religio-cosmological mystification elements built around the present monarch’s reign have only served to confirm his authority and potency in matters hydrological and meteorological in a primordial sense. As Handley (2006:164) maintains:

“Official accounts have the king leaping headfirst into combating rural poverty, and especially fostering water resources development, as soon as he occupied the throne in 1951. The mythology even goes so far as to say Bhumibol was born with a hydrological bent, predestined to develop sustainable water supplies for all his people, not unlike the Hindu *devaraja* as source of life and fertility to the land.”

The king’s ideas and vision around water resources development, readily offered as policy advice to the government and public through up-country visits, speeches, exhibitions and royal publications, were first put to the test and made tangible at his own palaces and royal development centres, then later through his personal charity foundation and via the vehicle of so-called “Royally-initiated Projects”.

10.5 Royally-initiated projects

“His Royal Initiative Projects aim to relieve problems of water whether flood, drought or pollution aim to mitigate people's sufferings. He endeavours to study on how to tackle water resources development and management because he is certain that without the water-related problems that damage crop yields and with availability of sufficient water, the standard of living of those impoverished rural people could be better”

Source: (Department of Water Resources, 2008)

Originally established on an *ad hoc* basis during the Phibun era supposedly using the monarch’s own financial resources, the Royally-initiated Projects (*khrong-gan an-nuang maa jaak pracha-damree*) initially concentrated on providing social welfare for disaster relief and providing direct charity to the poor, plus a production unit for royal films and radio broadcasting projects (The Public Relations Department, 2000). The first Royally-Initiated Project is reputed to have commenced in the 1950s at Ban Huay Mongkhol, Hua Hin District, Prachuap Khiri Khan Province (The National Identity Board, 2000), and then later another village study centre was built at Hup Kapong in nearby Cha-am District in an area with infertile soils and uncertain rainfall to put to the test the king’s formative ideas on water resources development. He reportedly requested the Border Patrol Police to bulldoze roads to the village and build a small storage reservoir in 1963, as the initial crucible for a life-long

experiment in developmental social engineering by the monarch (Handley, 2006). The projects were generally located in more remote districts of the country, especially those formerly considered prone to the influence of the ideology of communism and border insurgency from neighbouring states (see Chapter 5). As the ideological and physical struggle against communism intensified during and after the Sarit regime, so the Royally-Initiated Projects expanded their remit and scope into new fields of development²⁴¹ nationwide. A key founding principle was that the projects were to act as sustainable agricultural demonstration sites for surrounding communities' benefit based on Buddhist economic principles²⁴².

During the 1960s and 70s, a number of new palaces and Royal Projects were deliberately sited near to former Communist Party of Thailand (CPT) strongholds, including one in the Phu Phan hills of Sakhon Nakhon (Chapter 8, Section 8.3), based on a reasoning that state development assistance and democracy were the local population's greatest needs, so they would not fall prey to the propaganda of "foreign" ideologies (Dejkunjorn, 2006). Bhumibol wished his reign to be closely identified with fighting poverty and championing development, so the royal projects became an integral part of a hegemonic process used "to win a political-ideological war", argues Chitbundit (2007). At the same time, the king was reportedly critical of the state's approach to development and heavy-handed excesses during the military counterinsurgency campaign, which he claimed was encouraging disaffected villagers to join the CPT (Handley, 2006). Revealingly, in a rare televised interview for a 1980 BBC documentary, Bhumibol explained that his main contribution to rural development activities was constructing over 400 irrigation projects²⁴³. He is portrayed as a hard-working and lonely monarch fighting not only local poverty and drought against the odds from his "bare-bones war operation centre" in the palace, but also battling inept and ineffectual government approaches to development. According to Handley (2006:272), the king "refers only to his own work, as if the government doesn't exist".

²⁴¹ A favourite development challenge, well supported by foreign aid donors, was opium eradication and substitution projects for Northern hilltribes

²⁴² Bhumibol is reputed to have been impressed by the ideas of E.F. Schumacher's *Small is Beautiful*, which were later integrated into his "Sufficiency Economy" philosophy (Handley, 2006).

²⁴³ The two hour documentary called *Soul of a Nation* and was built on a premise that the king was a "humble, modern leader guided by Buddhist insight" and "protecting his kingdom from the imminent threat of communism" (Handley, 2006). See: <http://www.youtube.com/watch?v=PJqblboHGh0>

After the virtual military defeat of the CPT²⁴⁴ around 1981, a state-funded “Office of the Royal Projects Development Board” was established to bureaucratize and normalize the relationship between the monarchy and state institutions concerning rural development efforts. According to Chitbundit (2007), this new agency focused much of its early development efforts on implementing large-scale irrigation projects around the country. The king was able to mobilise support from a number of state agencies to set up six Royal Development Study Centres that acted as experimental research stations and extension centres, including one located near the Phu Phan Palace²⁴⁵. According to the National Identity Board (2000:311), “[T]he development study centres can be compared to living natural museums, which reduce the number of steps in the coordination of management that conventionally involves agencies operating separately on their own.” A Public Relations Department (2000:85) book on the monarchy estimates that over three thousand royal development projects have been established nationwide and speculates why these are “more noticeable than the government’s policy platform”, maintaining that only the king is able to promote compromise and achieve cooperation amongst squabbling agencies.

The next logical step for the king was the formation of the Chaipattana²⁴⁶ Foundation in 1988. This is essentially a royal development charity set up to complement the work of the Royal Projects and mobilize funds from a variety of sources, including public donations, “to help accelerate rural development” in areas perceived by the king to be insufficient or constrained by “budget and procedural problems” (The National Identity Board, 2000). This Foundation, along with constant monitoring of the Royal Projects, gave him more reason to devote increasing periods of time in the countryside advising on, designing and implementing water resources development projects, putting to practice his engineering skills (Kiattikomol, 2000). A sympathetic biography (but later banned) by a Briton who enjoyed almost unprecedented personal access to the king over

²⁴⁴ According to Baker and Phongpaichit (2005), most student supporters of the CPT left the jungle bases between 1979-81, while the majority of CPT armed units surrendered their weapons between 1982-83 or fled to neighbouring Lao PDR.

²⁴⁵ This Centre was located not far from Baan Non Rua and the Lam Nam Oon Irrigation Project, with several villagers I met having attended agricultural training courses there at one time or another, including courses that focus on teaching the king’s “Sufficiency Economy” philosophy.

²⁴⁶ Chaipattana literally means “Victory of Development”, with the King acting as Honorary President and Princess Maha Chakri Sirindhorn, the Executive Chairperson of the Foundation (National Identity Board, 2000)

several years, noted the guardedness with which the king was obliged to speak when in his presence, with the exception of brief periods travelling in the privacy of his aeroplane, when “he’d talk excitedly about reshaping mountains, about digging out dams here or tapping a river there” (Stevenson, 2001:2). As Handley notes, his aides and observers reported being in awe of the king’s ability to look at a watercourse, study a map “and immediately understand the landscape and water resource potential. It was like Rama IV predicting a solar eclipse, the Chakri genius” (Handley, 2006:289). This sense of reverence at the king’s supposed innate ability to understand hydrology, geomorphology, sociology and agro-ecology to rapidly deduce the “correct solution” to local needs is conveyed in the following quote attributed to Dr Sumet Tantivejakul, Chairman of the Royal Projects Development Board:

“We saw His Majesty getting out of the royal car with a few tools, perhaps a communication radio, a camera, and an indispensable map and a pencil which he used up to the eraser. His Majesty is prudent. He sets himself as an example for what he preaches. The method he uses is, I would say, truly modern. You can see his handwriting all over the map. And the first thing he does is to check the accuracy of his data, by talking to senior citizens in the community. He would settle down in this task for a long time. After checking data, His Majesty immediately formulates the project, deciding in five minutes or seven minutes at most where the reservoir will be located, what size, what capacity, and how the water will be transported through natural channels to the village. Finally, His Majesty turns to us as the core agency, discussing the philosophy of the project, what can be expected in ten years' time, how to rehabilitate the watershed areas in accordance with natural features, for example.”

(Source: Foreign Office. The Government Public Relations Department Office website
<http://thailand.prd.go.th/ebook/communication/part3.php?s=2>
Accessed 17 May, 2011)

Integral to the hagiographic official narratives surrounding the Royal Projects and their supposed successes in combating rural poverty (e.g. The National Identity Board, 2000), was a parallel comparative notion that there was somehow a failure of government development policy approaches resulting from corrupt electoral politics. In the 1980s, the king occasionally criticized bureaucrats for ignoring the kind of simple and effective solutions he recommended for water resources

development. Handley (2006) notes a royal speech in 1981 used to describe the bureaucracy as “useless”, “unresponsive” and “wasteful” in tackling the development problems of farmers, while his own water resources projects cost just one tenth of those of the government and were carried out in a fraction of the time. Another key tenet of the royalist narratives supporting the king’s model of development was the idea that elected politicians were invariably greedy, self-interested and corrupted by money and therefore were immoral, untrustworthy agents of development. It was implied that only a virtuous and paternalistic “moral politics” (see Fong, 2009), provided by the king’s interventions could deliver real and lasting development benefits to the rural populace. The royalists claimed the king’s strategy was an alternative and more enlightened water resources development paradigm to the state’s corrupt and bureaucratic approach (Handley, 2006). Hewison and Kitirianglarp (2010) see the royal development projects as ideological symbols of royalists’ portrayal of the king’s position as a champion of the poor, while Ivarsson and Isager (2010) point out a critical analysis of the king’s development projects has yet to be written.

On quite a few occasions during the fieldwork, I encountered state bureaucrats, politicians and local people who professed open admiration for the king’s public advice and practical work in helping solve the nation’s water resources management problems, especially through the Royally-initiated projects. These were perceived as making outstanding contributions to national development, in line with the “standard total view” of the monarchy (see Hewison, 1997). For example, the Director of the Sakon Nakhon Provincial Irrigation Project of RID, related to me that the king’s long term interest and intervention in the province’s main water resources management problems of flood and drought had alleviated much of the people’s “suffering” in the past. He compared the far superior hydraulic development situation in Sakon Nakhon over that of other provinces, being the direct result of the king’s intellectual and practical influence:

“We have the same characteristics, but ours are better than elsewhere because we have lots of reservoirs and the Royal Projects that uses the King's ideas. When he came he wanted to build reservoirs here and there. It has helped us more than other provinces.....”

(Source: Mr Sratta Rangrawd, Director of Sakon Nakhon Provincial Irrigation Project, the Royal Irrigation Department, during fieldwork interview, 29 April, 2010)

One ex-soldier turned local politician interviewee in Sakon Nakhon expressed awe at the king's personal ability to deliver water resources development projects and, at the same time, frustration at successive civil governments for promising large-scale irrigation projects to help the Northeast, but never actually delivering on their pledges:

“Actually, no matter which government is in, I've never seen any that will really build this [an irrigation mega-project for Isaan], except for the ideas of the Royal projects of the King himself. If the government is going to build it by themselves, then it will be difficult. Whichever government is in [office], trying to build this or that reservoir is difficult. The reservoir projects that happen are only because of him.....the Royally-initiated projects.”

(Source: Sgt Major Amphon Khamwongsa, Deputy Chairman of Naa Hua Bor Sub-district, Phanna Nikhon District, Sakon Nakhon province. Interviewed on 25/6/10)

This points to the credibility perception gap that the king enjoys over corrupt politicians as a hydraulic master. Empirical evidence gathered from the field and reports from various sources, however, suggest there is little evidence to support the idea that contemporary Royally-Initiated Projects have been any more or less successful or sustainable than regular bureaucratic agency projects, at least on a practical level. Rather, both seemed to embody an essentialized, top-down, bureaucratic, non-participatory and paternalistic approach to natural resources management that has evidently misinterpreted the Northeast's socio-ecological land-waterscapes and failed to achieve lasting or equitable outcomes. During a survey of reservoirs located along the base of the Phu Phan hills, I found several irrigation schemes that, like Huay Wang Rua, have signs identifying them as Royally-Initiated Projects and almost without exception they were as poorly maintained, dilapidated, abandoned and water scarce as ordinary RID projects inspected (see Figs 9.6, 10.3 and 10.4). However, larger-scale Royally-Initiated Projects water resources development have the reputation of being considerably less transparent and implemented in a more authoritarian manner than regular state

funded projects as a result of the “royal cachet”, and were far less likely to be subject to any degree of public criticism by civil society (see Section 10.9 below).



Fig. 10.3 A Royally-Initiated project in Muang District, Sakon Nakhon, that was almost empty, unused and unmaintained in April 2010



Fig. 10.4 Another Royally-initiated project nearby at the foot of Phu Phan range, also showing signs of little upkeep, advanced dilapidation and unused for many years according to locals

10.6 King’s seminal role behind national water resources management planning and policy making discourse

It is a contention of this thesis that King Bhumibol’s role in Thai water resources development and management has been far more than just symbolic, but has been inherently material as well, as indicated in the foregoing evidence. His discursive and material influence is also evident from the manner in which water resources planning and policy-making processes refers to advice given in royal speeches or pronouncements, both directly and indirectly. This has clear knock-on implications for development practices and projects, a phenomenon that was readily apparent in all three case study villages. Moreover, I would maintain that a large proportion of the current policy discourse and practice in Thai water resources management is directly attributable to the problem and solution framing narratives established by the king himself.

This is evident in the prolific official Thai language literature²⁴⁷ devoted to idolizing the king's gifts and ability as a water resources manager, with open references made by government agencies to the inspiration they draw from the king's knowledge and ideas (e.g. Royal Irrigation Department, 2009; Anonymous, 2011; The Government Public Relations Department, 2011). In fact, his influence could not be more explicit in the following translated passage from a glossy, souvenir book produced by the Ministry of Agriculture and Cooperatives to celebrate fifty years of the king's reign, one section of which is devoted to his seminal role in developing national water resources (Ministry of Agriculture and Cooperatives, 1996:97):

“His Royal Highness the King has proclaimed that in water resources management for agriculture there are three issues, namely:

- Solving the problem of water scarcity
- Solving the problem of floods, and
- Solving the problem of water pollution”

The book intersperses a narrative of the king's inventions and timely interventions in developing the nation's water resources, interspersed with short excerpts from his speeches. It devotionally portrays the king's wisdom and normative vision for a future “hydrotopia”²⁴⁸ based on a mix of technology-driven, modern agribusiness-oriented intensive irrigation approaches, alongside small-scale, traditional peasant-oriented irrigation existing together in harmony. At the same time, it was clear that overall hydraulic control would remain under the direction of a benevolent agro-managerial state. The book revealed that royal advice concerning how to manage water resources is partly communicated to the bureaucracy in the form of so-called “royal guidelines”, e.g. “the Royal Guideline for Solving the Problem of Salt and Brackish Water from the Sea” and also in the form of occasional direct audiences with state officials and during frequent former visits by the king to upcountry projects (Ministry of Agriculture and Cooperatives, No date).

²⁴⁷ I found in the reference sections of university libraries I visited, usually several shelves devoted to hagiographic books about the royal family, often containing more pictures than text. Most were published by state agencies, but also some were produced by private companies, (e.g. the Siam Commercial Bank), professional bodies (e.g. The Engineering Institute of Thailand) or other organizations linked to a wider monarchical network.

²⁴⁸ I adopt this term as a suitable one in this context, stemming from a conjunction of hydraulic and utopia, and apparently coined in the context of the hydraulic society of the American West, by lecturers at Utah State University (Source: <http://environment.utah.edu/students/Hydrotopia.pdf>).

The king's discursive influence on water resources management in Thailand is readily discernible in current national plans and policy narratives. This observation may seem anachronistic given the popular view in the West that a constitutional monarch should normally remain detached from involvement in everyday affairs of national governance. But in this case, tracks and traces of the king's philosophical views and opinions related to water resources development are evident in numerous state documents I have reviewed during the course of this research. The most clear cut indicator of this phenomenon is the manner in which the king's problem framing of the three key water issues mentioned above are uncritically reproduced in official reports, visual and print media outputs and verbal accounts by state and non-state actors alike. For example, the following quotes highlight the convergence between the royal and bureaucratic rhetorical framing of problems and solutions, adding to other examples provided in Chapter 6:

“Now what we will focus on is solving the problems that we have, which are drought and flood. But for flooding we are quite fortunate that the King has made reservoirs around Phu Phan [hills]. Therefore, up in the hills we rarely have problems, but down below does, so we are using his idea of the *gaem ling* projects and expanding canals by dredging.”

(Source: Yutthapoom Khamwan, RID engineer, Sakon Nakhon Provincial Irrigation Project, interviewed on 29 April, 2010)

“If you look at the actual problems for Isaan, the most serious problem is drought, followed by the problem of flooding. But with flooding, it is not such a major issue really, because mostly it is the result of floods in lowlands that happened in the past; that used to be wetlands or whatever, right? And people pushed into occupying that area, so they have minor problems.....that is how I view it. The most serious problem concerns drought. The government must answer how it will solve the problem of drought in the Northeast.”

(Source: Prasit Warnset, Director of Cooperation and Management of the Chi Basin, under the Water Resources Department (WRD), Regional Area 4 Office, Khon Kaen. Interviewed 6 June, 2012)

“The thing I always try to propose in the Agriculture Ministry and prod the government continuously for, is to prepare and release a budget for developing existing water resources, such as tributaries, streams, swamps, lakes and excavate them so they can store water and

be in a useable state, like with the *gaem ling* project, following the theory of His Majesty the King. He proposed developing *gaem ling* for storing water throughout the local areas.”

(Source: H.E. Supachai Phosu, Deputy Minister of Agriculture and Cooperatives, interviewed on 27 June, 2010)

Region Budget focal area	Northern	NE	Central	Western	Eastern	Southern	TOTAL
Solution of water scarcity problem	35,199.2	51,279.0	7,468.3	9,525.7	31,575.6	25,503.7	160,551.5
Solution of flooding problem	10,409.6	6,751.0	9,656.5	1,307.9	509.6	5,734.2	34,368.8
Solution of water pollution problem	344	407.3	351.6	362.7	638.5	260	2,364.1
Water recycling			555.0				555.0
Management	1,405.7	1,473.3	1,625.6	539.0	929.0	731.0	6,703.6
Dredging existing water sources	441.5	4,694.3	0	41.0	153.3	20.0	5,350.0
Royal Rainmaking							5,153.0
TOTAL	47,800	64,604.9	19,657	11,776.3	33,806	32,248.9	222,046
Percentage by region	21.5	29.1	8.9	5.3	15.2	14.5	

(Source: Department of Water Resources data, 2006, obtained from unofficial source and translated by author)

Table 10.2 Budget allocation plan for “Integrated Water Resources Management” in Thailand by region and problem sector 2006-2009 (Unit: million Thai baht²⁴⁹)

Following the formation of the DWR in 2002, “the officially sanctioned water management paradigm” of Thailand has become Integrated Water Resources Management (IWRM) (Floch and Blake, 2011:22), which again is a dominant international discourse that has been promoted by the king in past speeches, along with the related concepts of river basin management, participatory management (RBOs), water user group and cooperative formation on state irrigation schemes (The National Identity Board, 2000). The extent to which the national planning of water resources development and management is modelled on the king’s problem framing, was graphically represented in the structure of the national water resources development budget plan in 2006, as illustrated in Table 10.2 above. It illustrates the relative budget allocation to solving each problem issue by geographical region, showing a/ how solutions to water scarcity receive over 79 % of the total budget; b/ the Northeast is allocated most state financial assistance overall, with 29 % of the

²⁴⁹ NB: In mid-2006, the exchange rate was approximately 38 THB to 1 US\$

total national budget; and c/ water resources “management” is only allocated about 3 % of the total budget, with the other 97 % being essentially infrastructure construction projects.

10.7 The king as chief ideologue of irrigationalism

King Bhumibol, when perceived as a sacral, benevolent and omniscient “Father of Water Resources Management”, paternally guiding an awe-struck and reverential populace in his beloved specialist field of water resources management and rural development, then it becomes easier to appreciate the profundity of his chief ideologue role within Thai hydraulic society. I argue that the king has been the seminal figure responsible for constructing and nurturing the national hydraulic developmental discourse over the course of six decades – a contemporary “Irrigationist Philosopher” (cf. Hamilton-McKenzie, 2009). Like David Ben-Gurion and Ariel Sharon promoting an interlinked Zionism and irrigated agriculture expansion (Lipchin, 2007), the king has attempted to overcome a capricious drought and flood prone natural environment and lead his people to an irrigated Eden in the Northeast. In practice, the king has occupied an unassailable position within the Thai political landscape over many decades, protected by official narratives his station is said to be “above politics” and neutral in such affairs of state (Connors, 2008). Hewison has argued that this carefully crafted image is a myth, and in fact the king has regularly intervened in the political process and “often appears to be acting outside the limits normally considered appropriate for a constitutional monarch” (Hewison, 1997:72-3). Similarly with the promotion of irrigationalism as a national developmental and technocentric project, he is at once highly visible as a progenitor of the discourse, yet there is an unshakeable societal taboo around discussing his role in a political sense.

In the popular view, the king is considered virtually sacred and can literally “do no wrong”; unlike his wife, children and other family members, all of whom may attract varying degrees of public criticism, albeit in a somewhat muted manner under the strict restrictions imposed by the *lèse majesté* law and far-reaching social sanctions imposed on transgressors (Streckfuss, 2010, 2011). The king, by contrast, assumes a

decidedly more deified position in Thai society that has allowed him a significant degree of licence in zealously pursuing his hydraulic development interests, without fear of criticism or censure²⁵⁰. When the king lectures an audience concerning his philosophical views on “Sufficiency Economy” or water resources development, his words are not merely symbolic, but are likely to become translated into national policy. However, the discursive process is not in any sense a two-way process and the absence of a dialogue may in part be a contributory factor to the complex societal conflict associated with water resources development policy and practice in Thailand, as suggested by Handley (Handley, 2006).

For example, the king’s discourse has been seminal in ensuring the irrigation sector has retained a status as a “privileged solution” amongst other rural development sectors competing for a share of state budget funding, to the direct financial benefit and legitimacy of the RID, creating a budgetary funding priority for irrigation infrastructure that appears to have changed little since the Sarit era (see Chapter 5, Section 5.3.6). The RID, by default, hides behind its royal credentials to remain obscure and remote from scrutiny, as a closed “black box” institution. The king justified his worldview in a speech to members of the Bangkok diplomatic corps gathered at Chitralada Palace (the king’s main residence) on 26 July 1989 (Ministry of Agriculture and Cooperatives, 1996:102):

“.....the area of work that receives priority concerns irrigation, because it is believed that if there is no irrigation, the country would be arid. When it is arid, one cannot cultivate; if there was no cultivation, there would be no agricultural work, which is work directly beneficial to the citizens. Irrigation makes one think of agriculture, but the livelihoods of ordinary people require water for consumption.....”

It seemed apparent from this proclamation, that the king not only regards irrigation as a *sine qua non* of Thai agriculture nationally, but without it, the nation might slide into a calamitous state of water scarcity and rural crisis, thereby prolonging the agricultural nation myth (farmers as the backbone of the nation, ideology of *muang fai* irrigation, peasant communitarianism, agriculturalism, etc. discussed in Chapter 5,

²⁵⁰ In his December 2005 birthday speech, the king appeared to invite criticism, claiming “If the king can do no wrong, it is akin to looking down upon him because the king is not being treated as a human being. But the King *can* do wrong” (Pilling, 2011)

Section 5.3.1). Such moral panic-inducing narratives have traditionally been effective tools for a domestic audience, by seeking to strengthen the righteous, warrior-king (*dhamma raaaja*) image in fighting for the interests of the impoverished Thai farmer against natural disasters and social enemies, like political corruption and predatory neo-liberal capitalism. Similar rhetoric is evident in the moral imperatives the king has used in exhorting Thai society to adopt his Sufficiency Economy philosophy principles to avoid national collapse (Isager and Ivarsson, 2010). The king has been known to initiate crisis narratives that warn of the dangers of parts of Thailand becoming “a desert” unless his advice was heeded on halting deforestation, managing upland watersheds and building sufficient and appropriate water resources storage infrastructure (Molle and Floch, 2008b). In a December 1993 annual birthday speech, the king exhorted officials to rapidly implement two large-scale “multi-purpose” storage dam projects in central Thailand he had proposed constructing under the aegis of RID²⁵¹, reported stating:

“If we don’t do it now, in 5 to 6 years, the cost will rise 2 or 3 times. In the end, we will have to postpone it further; and when we postpone it further, it will never be done. We will surely suffer lack of water. The country will become a desert. And we will have nowhere to go....” (Source: Ministry of Agriculture and Cooperatives, 1996)

Such an authoritative and hubristic endorsement for accelerating state construction of large-scale hydraulic infrastructure to avoid looming desertification in a humid tropical lowland delta region is distinctly reminiscent of earlier justifications used by military leaders close to the monarchy for urgently pursuing the Green Isaan project in the late 1980s (see Chapters 6 and 7) and repeated by several prime ministers since to justify pet mega-projects. This allowed a “TINA” mentality (see Mehta, 2005) to take hold in the military, bureaucratic and political elite classes that has fed the dominant public discourse since. Widespread uncritical acceptance of the elite problem framing is discernible to the present, for instance, in some of the responses to the public perception survey conducted for this thesis (see Appendix C). The main conduits for the king’s ideological discourse concerning water resources development and management have been hydraulic bureaucracies (e.g. RID, DWR,

²⁵¹ Following this royal endorsement, both dams referred to were subsequently built by RID without open opposition (see Section 10.9 below for further discussion)

EGAT, DEDP, etc), the multiple military agencies, the directly-controlled monarchical organizations (e.g. Office of Royal Development Projects, Bureau of the Royal Household, the Crown Property Bureau, and the Chaipattana Foundation), international development agencies (e.g. FAO, UNDP), and various civil society organizations that have been co-opted to the royal vision. As noted in Chapter 5, Section 5.4, the RID devotes much of its website and public reports to an adulatory treatment of the king's contributions to national water resources development, a trend being increasingly followed by the DWR in its publicity material (Fig. 9.4).

Over the course of his reign, it appears that the king's "developmental gaze" (see Grillo, 1997) or alternatively, drawing from Foucauldian notions, his "panoptic gaze" (Krittikarn, 2010), has been resolutely focused on promoting a techno-centric and managerialist discourse around water resources development and management, that constructs a series of normative statements concerning relationships between water, society and nature. These have subsequently been adopted as integral, commonsensical elements of the dominant national orthodoxy²⁵². Naturally such monopolization of discourse cannot be achieved by a single actor alone, no matter how powerful, but requires an extensive supporting cast of strategic actors and allies, willing to propagate and strengthen the discourse at every opportunity in furtherance of their own material and political interests. According to Wittfogel's hypothesis, these actors form the core ruling class or bureaucratic nobility of a hydraulic society and work to preserve the hierarchy from internal and external threat to ensure its stability.

10.8 Of rulers and viziers

Wittfogel's descriptions of the autocratic nature of a sovereign governing an agro-managerial or hydraulic society, resonates closely with the rise to and maintenance of power by Thailand's present monarch. Wittfogel (1957) is adamant that basic to all hydraulic regimes is a hierarchical system headed by a ruler (sovereign) with a

²⁵² Another example is given by Forsyth and Walker, 2008, in a comprehensive treatment of the powerful effects of the pervasive "deforestation causes drought" narrative in Northern Thailand, that has long been propagated by the monarchy and other conservative forces in Thai society.

personal entourage (his court) who controls and directs numerous civil and military underlings through a corps of ranking officials. “In his person the ruler combines supreme operational authority and the many magic and mythical symbols that express the terrifying (and allegedly beneficial) qualities of the power apparatus he heads. Because of immaturity, weakness, or incompetence, he may share his operational supremacy with an aide: a regent, vizier, chancellor, or ‘prime minister’. But the exalted power of these men does not usually last long. It rarely affects the symbols of supreme authority. And it vanishes as soon as the ruler is strong enough to realize the autocratic potential inherent in his position” (Wittfogel, 1957:305).

Since assuming the paternalistic mantle prepared for him by Field Marshall Sarit, as the strict but benevolent “Father of the Nation”, and later a sacred “Development King” (Chitbundit, 2007), Bhumibol has carefully cultivated several close proxies or “viziers” (to use Wittfogel’s term) to share the exercise of power over national water resources development, while remaining firmly in control at the pinnacle of the hierarchy himself. I would argue that his chief vizier in recent decades has been General Prem Tinsulanonda, former army commander, prime minister for eight years and current president of the Privy Council (*Khana Ongkhamontri Thai*); all posts for which he was handpicked by the king (McCargo, 2005). The Privy Council is a secretive advisory council that was reinstated as an institution a year after the king’s ascension to the throne and has a strategic orientation towards appointing pro-royal politicians from parliament, retired generals and judges, asserts Fong (2009). McCargo (ibid.) argues that the King has placed complete trust in Prem, viewing him as an incorruptible and skilled alliance-builder and patronage wielder. Beginning in 1980 and for the next twenty years, “Prem served effectively as Thailand’s ‘director of human resources’, masterminding appointments, transfers and promotions. Prem’s power was never absolute, though it was always considerable” (McCargo, 2005:506). As should be apparent from the genesis of the Green Isaan Project (refer to Chapter 7), Prem acted as one of the seminal facilitators in ensuring the project’s momentum, until it was later hijacked by the personal political aspirations of General Chavalit Yongchaiyudh; infighting between the military, the bureaucracy and politicians over control; widespread local resistance (Pye, 2005) and eventually replaced by a clone-like competitor, the Khong-Chi-Mun Project (Sneddon, 2003b).

Prem is widely regarded in Thailand as the mastermind behind the September 2006 military coup that ousted prime minister Thaksin Shinawatra and placed key royalists in the subsequent interim administration (Pathmanand, 2008). Thus, the 2006 coup, like its predecessors, has been regarded by some as a palace coup “dressed in potent royal symbolism” (Isager and Ivarsson, 2010), bringing to the fore, close relations between royalist and military factions. Since the rise of binary colour-coded political conflict in the last four years, Prem has been cast as a divisive figure in Thai politics. For example, during fieldwork conducted at the height of the political tensions in early 2010, with growing internal divisions very much in the public consciousness, some people interviewed professed admiration for Prem’s style of leadership, while others expressed strong negative opinions towards him. Falling into the former camp, the current President of Ubon Ratchatani University expressed a strong faith in calling for a return to past political values and approaches to traditional water resources management, supposedly embodied by Prem:

“There is one political party that I trust; the Democrats. I think if they could last long as the government, they would do it [water resources development] in this way. I would like to see a political party that once they become the government, the prime minister, to follow what General Prem did even though he was a soldier. But during that period the political situation could not be solved, so he was chosen to serve as the prime minister. He was excellent. Concerning rural area issues, he allocated plenty of budget to them.....”

Source: Interview with Dr Prakob Wirojanagud²⁵³, President of Ubon Ratchatani University, Ubon Ratchatani. 12 January, 2010.

Amongst others who professed a dislike of Prem, there was a tendency to recall his past role in communist suppression and obstructing a nascent participatory democracy movement during his years spent as commander-in-chief of the army, minister of defence and prime minister, by supporting and enabling various “psych-ops” tactics, through his control of the Internal Security Operations Command (ISOC)²⁵⁴. Alternatively, they referred to what they perceived as opportunistic

²⁵³ Dr Prakob, with a long career in Thai academia and consultant to various water resources development projects in the Northeast, wrote a Thai language book espousing the benefits of communitarian and small-scale approaches to irrigation management that praises Prem’s role in promoting these same approaches during his eight year premiership in the 1980s (Wirojanagud, 2004).

²⁵⁴ ISOC is a unit of the Thai military devoted to national security issues that was implicated in numerous atrocities against activists and civilians in the 1960s and 70s (Handley, 2006). Prem was a senior officer in ISOC.

manipulation of the monarchy and military factions by Prem for selfish ends and a stubborn refusal to bow out from politics at the age of over ninety. Water resources development discourse constitutes an important, but little considered, component of the recent elite struggles for command and control in Thai politics, especially evident in the crucial electoral and economically strategic arena (or “battleground”) of the Northeast.

A second closely trusted aide of the king with more direct connections to issues concerning water resources development and management than the militaristic-leaning Prem, is Dr Sumet Tantvejakul, who as Assistant Secretary-General of the National Economic and Social Development Board and Director of the Royal Projects Development Board was another indispensable actor in promoting the Green Isaan Project and guarding it against criticism (see Chapter 7, Section 7.3.2). As Secretary-General of the Chaipattana Foundation, Sumet has consistently been one of the most ardent supporters of the king’s role in rural development, tirelessly portraying Bhumibol as a virtuous king, embodying “Buddhist principles of industriousness, sacrifice and selflessness in seeking to end poverty”, notes (Handley, 2006:385). Sumet claimed the king was an “environmental activist”, due to his superior knowledge in developing appropriate water resources in balance with the needs of the people and the environment, while at the same time being quick to defend the king’s solid support of certain large-scale dams, such as the Pasak Cholasit (see Fig. 10.1) and Tha Dan projects²⁵⁵. Dismissing civil society calls for public hearings over controversial state infrastructure projects, Sumet reportedly dismissed them as unnecessary because, “His Majesty has been holding public hearings for the past 30 years.....He urges people to say what they really feel”, and thus insinuated he instinctively knew what was best for the country into the future (Handley, 2006:386). Other potential contenders for vizier roles in the past have included Field Marshall Thanom Kittikajorn (Sarit’s successor) and less overtly, M.R. Kukrit Pramoj (who perhaps was more of a valued ideologue than frontline politician, even though he briefly became Prime Minister between 1975-76).

²⁵⁵ Both these “multi-purpose” dam projects are located on the eastern fringes of the Central Plains and are claimed by RID, their operators, to regulate seasonal flooding, provide water for Bangkok and supply irrigation for dry season cropping.

10.9 Suppression of alternative voices to state-sanctioned discourse

As has been previously elucidated, the official royalist discourse has perpetuated a strong national myth around the king's supposed semi-divine genius in the field of water resources management. Such widely held perceptions do not, however, imply that all citizens necessarily subscribe to the dominant problem and solution framing narratives, national policies, strategies and concrete projects carried out in the name of the king through the bureaucracy. On the contrary, I found guarded scepticism and criticism of the official-royal discourse on water resources management, especially amongst some civil society actors and foreign consultants. Evidence suggests there has been occasional overt opposition and resistance to some of the royal-supported water resources development schemes, such as the Nam Choan and Kaeng Sua Taen dam cases, where public pressure and protest has led to the cancellation of these projects (Bello et al., 1998; Hirsch, 1998; Handley, 2006). Typically, however, people negatively impacted by Royally-Initiated dam development projects are unlikely to protest, but choose to remain silent and accept their fate for whatever reason. Some might feel a sense of deference to the monarchy and associated willingness to sacrifice for the nation, which has been a common refrain from dam proponents for years. However, the reason may as likely be due to a genuine fear of state sanctions or reprisals against them or their family, should they complain to vocally. When the limits of ideology and consensus appear to be reached, then the hydraulic state has no compunction in resorting to more forceful tools in its armoury to ensure domination of sub-altern individuals and groups to minimize resistance to its development mission of socio-ecological control, simplification and legibility (cf. Scott, 1998). The modern Thai state has a record of resorting to a variety of violent and coercive methods against subaltern actors resisting its rural development programmes, including but by no means limited to its irrigation development programme (Turton, 1986; Pye, 2005). A well-documented case stretching over a number of years of repeated state-sanctioned violence conducted against opponents to a dam project was the EGAT-built and operated Pak Mun Dam, in Ubon Ratchatani province (Missingham, 2003; Foran and Manorom, 2009).

Where civil society groups and impactees have opposed dam projects on environmental or social grounds they have often been branded anti-development, unThai and selfish for representing just a small minority blocking the aspirations and progress of the majority (Foran, 2006; Chang Noi, 2009). The king, given his past enthusiastic support of large-scale “multi-purpose” dams built by EGAT and RID, has on occasion strengthened and vindicated the rhetoric of officials’ and politicians’ condemnation of citizens who have dared to resist or oppose state hydraulic infrastructure projects, charges Handley (2006). Bhumibol was reported to have told Thai diplomats in a televised speech in August 1993 that dams were inherently good for the people (Handley, 2006:367).

In cases where opposition did arise to irrigation and flood control projects that the king had personally backed, the king was reportedly annoyed by environmental groups’ recalcitrance towards his superior knowledge. In December 1993, he felt it necessary to launch a “full-scale assault” on the detractors of the RID’s Pak Panang, Pasak Cholasit and Tha Dan projects during his birthday speech, alleged Handley (2006). The king defended the dams’ rationale, claiming they had been delayed six years due to green opposition²⁵⁶ and claimed, “had they been constructed, there should have been no problem from drought and floods” (Handley, 2006:367, citing *The Nation*, December 5, 1993). Hence, the blame for any perceived negative impacts from earlier floods in the Central Plains was neatly pinned on environmentalists’ obtuseness and selfishness. The king declared that he would like to see the projects completed before his 72nd birthday in 1999, and added he had no wish to see any protests, as they were “tiring and useless” (ibid.). The effect of the king’s intervention was almost instantaneous, reported Handley (2006), with the government of PM Chuan Leekpai rallying to the call and approving the Pasak Cholasit dam within two weeks, while the other two needed more planning. The Director of Royal Projects, Sumet Tantivejakul, in support of the decision is reported to have said, “His Majesty sensed great danger if nothing is done. His Majesty is very patient, but time is pressing.....The dams are like a cancer operation for a sick body” (Handley, 2006:367, citing *The Nation*, 9 December, 1993).

²⁵⁶ According to Handley (2006), the reason for the dams delay was actually attributable to politicians in three previous governments arguing that the projects were not cost-effective, rather than the objections of environmentalists.

Meanwhile environmental NGOs were stunned into silence by the public show of royal defiance to any opposition to these dams, argued Handley (2006:367), “[T]he king hadn’t suggested dialogue or mutual understanding, or conceded any of their positions. They were painted like communists of two decades before, irrational, opposed to the people’s welfare, and disrespectful. Now any argument they made could be construed as *lèse majesté*.” During 1994, the anti-dam activists withdrew from public opposition, but challenged state knowledge through building “technical arguments backed by scientific research”. This rationalistic approach was equally interpreted as questioning the veracity of the king, as at his next annual birthday speech in December 1994, the king was reported to have gone through “a list of selected points and simply declared each one wrong” (Handley, 2006:367-8). All three dam projects were subsequently constructed and inaugurated by the RID, with barely a whisper of complaint from civil society. This, like other state tactics that rely upon the symbolic authority of the king’s name and iconic image, demonstrates the material effects of the royal voice in its ability to silence dissent and create intimidation and fear, as predicted by Wittfogel (1957:137): “[T]error is the inevitable consequence of the ruler’s resolve to uphold their own and not the people’s rationality optimum”.

The condemnatory attitude by Bhumibol towards critics of his hydraulic development vision, however, was not only confined to environmental activists. It could equally be turned to effect against lacklustre civil servants, corrupt politicians and even Prime Ministers, who could be criticized, censured or humiliated in public through the king’s speeches, when they did not measure up to his exacting expectations. It would take a brave individual to publically question the king’s knowledge and wisdom in the field of water resources management, given his proven expertise. Once a project is declared “Under Royal Patronage”, it is usually considered beyond-limits for civil society or academic investigation or direct opposition and takes on a higher degree of secrecy, making project documents harder to access from the implementing agency concerned. For example, with regards to the Royally-Initiated Nam Gam Irrigation Project, completed by RID in 2010 (see Chapter 9, Section 9.2.1), two environmental activists who had been monitoring the project for a number of years, related that they were unable to publicize its negative

environmental and social impacts, due to its “Royal Patronage” status²⁵⁷. There were several other smaller royally endorsed irrigation projects located in the Nam Songkhram Basin itself, which even though local contacts considered them purely “showcase” projects with minimal benefits, it was not possible to publically condemn them for fear of state retribution.

There is a popular narrative in Thailand that in instances where a minority speak out against a state infrastructure development project, this implies that by default the silent majority are in favour of the project. Therefore silence is interpreted as consent, while opponents are smeared as representing unpatriotic rump of noisy ingrates, retarding the nation’s development through their actions. This sentiment is common amongst water bureaucrats and was expressed to me on several occasions in interviews, such as the following quote from a senior RID official:

“And in our country, people who disagree will speak loudly; people who agree will be quiet, not give their opinions. So it appears that there are more people who disagree than those who agree. In fact, those people who agree just say nothing. It is a cultural problem in Thailand that is different from *farang* culture.”

Source: Manas Kamnerdmanee, Director of the People’s Participation Promotion Office, RID, Bangkok. Interviewed on 4 August, 2010)

Other non-violent discursive tactics commonly used by the state to ensure irrigation projects proceed include “[A]voidance, distortion or manipulation of EIAs, attempts to denigrate social movements, continued use of overriding objectives (food security, national security, poverty alleviation, etc) to close debates, token participation of stakeholders to build legitimacy, and other political devices” argue Molle et al (2009a:275). During the course of living and working in Thailand, I have quite often encountered state officials who hold the view that to oppose or resist state development projects is somehow unThai behaviour and demonstrates disloyalty to the nation. Occasionally, protesters are portrayed as lackeys of ill-intentioned foreign groups seeking to sabotage Thailand’s state-sanctioned route to development and prosperity. Indeed, I encountered a degree of suspicion and animosity from some

²⁵⁷ This project was officially declared open on July 7, 2012 during a rare visit by the ailing king to the Royal Irrigation Department’s headquarters in Bangkok (The Government Public Relations Department, 2012).

district and provincial government staff in the Nam Songkhram Basin when asking questions about local irrigation developments and future plans. For example, one slightly drunk district agricultural extension staff I met in Sri Songkhram district blurted out contemptuously: “you are not an NGO are you?” I suspect he equated “NGO” with “communist”, as in this part of Thailand there has been relatively little NGO²⁵⁸ engagement up to the present and communist is still considered a dirty word.

10.10 Network monarchy and irrigation development

Through his pre-eminent position in society and unique strategic alliances with the hydraulic bureaucracy, royal agencies and senior military, business, politician and civil society actors, it would appear the king has been uniquely able to propagate and disseminate his ideas through an extensive network of formal and informal institutions and channels, largely unopposed by civil society discourse. Adapting the notion of “network monarchy”²⁵⁹ (McCargo, 2005) as a helpful general model of conceptualizing the process of power creation and retention by the present king, in this section I consider some of the chief actors complicit in a more specific notion of “hydraulic network monarchy”. This marries the concept to the field of socio-political hydraulic development and how this may strengthen understandings of sources of power and legitimacy in Thailand. I propose the idea that the king presides over a hitherto little considered, but nevertheless tangible political network – the hydraulic network monarchy²⁶⁰ - that has allowed the monarch to attain supreme authority and control (largely exercised through proxy agents) over water resources development discourse and practice. McCargo (2005:501) argues that the main characteristics of Thailand’s network monarchy between 1980 and 2001 were, “the monarch was the ultimate arbiter of political decisions in times of crisis; the monarchy was the primary source of national legitimacy; the King acted as a didactic commentator on national issues, helping to set the national agenda, especially

²⁵⁸ The king used to make a pun in speeches around the acronym for NGO, which happens to sound like the Thai word for stupid (*ngoh*), reports Handley (2006).

²⁵⁹ The core aim of network monarchy, according to McCargo (2006:503), is “to promote the power and prestige of the throne”. The prestige garnered, serves to underpin national identity, thus creating broader legitimacy for those associated with it.

²⁶⁰ This network could alternatively be termed a hydraulic development “strategic group”, following Evers and Benedikter (2009).

through his annual birthday speeches; the monarch intervened actively in political developments, largely by working through proxies such as privy councillors and trusted military figures; and the lead proxy, former army commander and prime minister Prem Tinsulanond, helped determine the nature of coalition governments, and monitored the process of military and other promotions.” McCargo points out the inherent illiberality of network monarchy, as it advocates reliance on “good men” and the marginalization of formal political institutions and processes.

Besides Prem and the king himself, other key figures in the hydraulic network monarchy have included, but certainly not limited to: certain past royalist prime ministers; the supreme head of the armed forces and other senior military figures handpicked by Prem; Dr Sumet Tantivejakul and governors of the Chaipattana Foundation; certain members of the Senate; senior judges; directors of the Crown Property Bureau; chairs of certain part royal-owned corporations involved in construction (e.g. Siam Cement Group) and agribusiness conglomerates; powerful members of the establishment in the Privy Council, including the King’s close aide and ex-Director General of the RID, Pramote Maiklad; and some respected civil society figures (e.g. Dr Prawase Wasi and Anand Panyarachun). In McCargo’s (2005) view, network monarchy has become a “para-political institution”, forged by the king and his allies, where the king is the central component in this novel form of governance or “semi-monarchical rule”. In other words, the king is far more than merely a paternalistic, benevolent, figurehead ruler, but bears certain resemblance Wittfogel’s descriptions of classical oriental despots, albeit lacking absolute power, which tends to support the analysis of Jacobs (1971). Taking up the core of McCargo’s argument of monarchistic networks strengthening the traditional authority and staying power of Bhumibol, Fong (2009:692) advocates for appreciation of other parallel networks that “have since the end of absolutism engaged in cultural construction of the sacred nationalist in material, aesthetic and institutional forms.” I would argue that hydraulic network monarchy is one of these parallel networks, so far not considered by social scientists as a conceptual construct with explanatory power.

As a consequence of resistance struggles and discursive competition from other domestic strategic groups or counter-hegemonic networks, the king has been unable to achieve outright political domination, especially since the 2006 military coup

when the country has become ever more fractious. However, in the field of water resources development I would argue, the king's position and authority is pre-eminent, despite vigorous attempts by political rival, the populist Prime Minister and now political exile, Thaksin Shinawatra, to symbolically upstage him and compete for the hydraulic ruler mantle. While in power, Thaksin repeatedly tried to capture some of the traditional legitimacy and authority of the king through usurpation of the hydraulic discourse and promote hydrotopian projects (Silarak, 2005) through a parallel network, in particular the national Water Grid²⁶¹ and several mega-projects to transfer water from Laos and neighbouring countries (Molle and Floch, 2008a; Molle et al., 2009a). It is apparent, however, that the hydraulic network monarchy is much stronger and more entrenched than Thaksin's weaker network, which lacks the discursive and symbolic legitimacy of its more extensive royal rival and has been thwarted to date. Whether this will remain so, following the death of the king is impossible to predict.

10.11 Summary

The findings from this chapter suggest that over the course of his reign, the king's power and prestige has steadily increased in large part due to the dominant role he has assumed over hydraulic development discourse, to the extent that his symbolic and rhetorical imprint is embedded in large sections of national water resource management policy and planning texts, as well as materially influencing actual development outcomes in myriad ways. Over six decades, through periods of national and regional geo-political instability and massive socio-economic transformations, the king as self-appointed "moral compass" and semi-divine ruler of the nation, has successfully managed to navigate his way to the apex of a complex hierarchy of power relations expressed through hydraulic control that in turn offers a significant degree of social control. It is proposed he heads a coalition of allied powerful actors and actor groups whose web of interests are maintained through

²⁶¹ As empirical evidence of this rivalry, I cite a "Mobile Cabinet" meeting held in March 2005 at Khao Phanom Rung temple in Buriram province to promote the Water Grid project to voters through the national media (Silarak, 2005). This Khmer built historic site is highly symbolic and suggested an attempt by Thaksin to steal some of the limelight from the king's previous near-monopolistic use of primordial simulacra as a tool of hydraulic authority.

what I have termed, “hydraulic network monarchy”. While this notion corresponds well with Wittfogel’s observations regarding the nature of hydraulic despots’ maintenance of power in ancient hydraulic societies through control of an “organizational web” that ensures its longevity, it would be misleading to suggest that all power is concentrated solely at the apex or that other groups are without agency to resist domination from the core. Indeed, the traditional social science analytical dichotomies of macro/micro, core/marginal, powerful/powerless are rarely clear-cut or empirically tenable in the messy “problemsheds” of complex hydraulic development contexts and multi-actor power struggles.

In one sense, Bhumibol can be conceived as a benevolent and patrimonial actor ruling through the willing consent of the people (Foucault’s “pastoral power”) and smart use of dominant state ideology (i.e. irrigationalism), but in another sense can be viewed as an autocratic leader sitting at the pinnacle of a dominant ruling elite class that has shown a distinct tendency to govern through force (Foucault’s “disciplinary power”) in the past, using the extensive state apparatuses of coercion to bring water and society under its control, first at the core and latterly at the margins of hydraulic society. While use of state-sanctioned violence to enforce authority has patently declined from its zenith during the military dictatorships of the 1950s to early 80s (e.g. Lam Nam Oon Irrigation Project’s implementation), which were an integral part of the anti-democratic processes used to elevate the king to his present position; the state monopoly of tools of fear such as silencing, knowledge manipulation and oppression of counter-hegemonic forces have far from disappeared, as evidenced through growing use of the draconian *lèse majesté* law against state critics. Ultimately however, the king’s rule and authority has been more authoritarian than totalitarian in style and substance, and therefore, fails to fully fit the Wittfogelian archetypal model of an ancient hydraulic despot. I propose, therefore, that King Bhumibol is perhaps better viewed as more hydraulic “high priest”, at least in the latter years of his reign. Nevertheless, in the official discourse he firmly remains portrayed as a paternalistic, sacral and near-genius “King of the Waters”.

Chapter 11 Conclusions

“And on the pedestal these words appear:
‘My name is Ozymandias, king of kings,
Look upon my works, ye Mighty and despair!’
Nothing besides remains. Round the decay
Of that colossal wreck, boundless and bare
The lone and level sands stretch far away.”

(Source: Percy Bysshe Shelley, *Ozymandias*)

11.1 Introduction

As has been argued by Mollinga (2008:101) and others (e.g. Mosse, 2003; Molle et al., 2009d), water resources management is an inherently political field, yet a depoliticization of discourses around the subject remains the dominant inclination of most water professionals and single disciplinary academic approaches to the study of water. In this thesis, a range of socio-political dimensions related to the irrigation development paradigm of Northeast Thailand, a peripheral region, have been explored both theoretically and empirically, based on evidence drawn mostly from a single river basin case study embedded in the wider context of the Thai nation. It has argued that a context-specific ideology of irrigation development, termed “irrigationalism”, can be identified as a significant driver of the nation’s “hydraulic mission” in Thailand, witnessed particularly starkly in the case of the Northeast, when the country is conceived as a modern variant of a marginal “hydraulic society”. The Nam Songkhram basin represents the margins of the hydraulic society, set against the core of Central Thailand and Bangkok where power is centred. The main research question entailed an inquiry into the main discourses, actors and practices that drive the phenomenon of irrigationalism, which have been systematically elaborated in the foregoing chapters. In this final chapter I lay out a summary of the main findings of the thesis arranged under headings of irrigationalism, hydraulic society, the role of the king and network monarchy, competition amongst hydraulic bureaucracies and resurrecting old dreams and schemes. Lastly, I provide some recommendations for possible further research directions.

11.2 The more things change the more they stay the same?

This thesis has confirmed a notable fixity in Northeast Thailand's development discourse noted by Molle et al (2009a:274), exemplified by "an obsessive focus" on irrigation and other hydraulic infrastructure development and "a disregard for alternatives". Despite massive external changes in the regional and international geopolitical context and internal, domestic shifts in the political environment between the 1960s and the present, variants on the same hydraulic "megaprojects" based on TVA-type "full basin development" blueprint plans are still trotted out with predictable regularity by successive Thai governments. Hence, it was unsurprising to find the RID quietly proceeding with the previously rejected Nam Songkhram Project during fieldwork (but using less transparent strategies than DEDP), or note the RID and the DWR officials actively competing to promote parallel reconstituted versions of utopian, regionwide irrigation mega-projects based on transboundary water diversions, yet still with no reference whatsoever to the previous failures (Floch and Blake, 2011). While internally the state may appear more fractious, both parties were competing with the same essential vision and set of values, and were determined that their particular megaproject would prevail over that of its rival, which perversely may be the main reason neither project has been implemented thus far. Both major hydrocracies suggest "there is no alternative" to their respective plans, while perpetually naturalizing water scarcity (cf. Mehta, 2005). This calls to mind the artificially induced and socially constructed nature of water scarcity in numerous instances, and that recalling Molle's (2008b), "enough is never enough" observations concerning the propensity to overbuild river basins, irrigation project planning and implementation remain constants in the Thai state's bid to control water resources and society. As intimated in Chapter 6, Section 6.8.1, there was an announcement in August 2012, that the present government under Prime Minister Yingluck Shinawatra is keen to push an US\$ 11 billion scheme for "a comprehensive water management system" to solve floods and droughts in the long term (Royal Thai Government, 2012), which shows all the hallmarks of a continuation of her elder brother's aborted national Water Grid Project (but with a bigger dose of flood control following the massive Chao Phraya floods of 2010) and all the previous

nirvanic water control schemes before (see Fig. 7.1), that have risen and fallen with the fortunes of their powerful political patrons.

This thesis reconfirms the old adage that *water is power* and that the dynamics of water control in certain cultural, social and political contexts are such that no matter how ill-advised, uneconomic and socio-ecologically destructive a hydraulic development project may be, once embedded in the minds of a narrow elite at the apex of society, such projects are continually revived and pushed to the point of implementation, “carrying with them the baggage of outmoded dreams” (Johnston and Donahue, 1998). As these authors contend, the contradictions exposed between myth and reality, between hydraulic development and reproductive strategies, and between those who stand to gain and lose, results in inevitable conflict, in Northeast Thailand no less than other contexts worldwide that have fallen under the spell of a hydraulic mission, from Arizona (Worster, 1992) to the Murray-Darling Basin of Australia (Hamilton-McKenzie, 2009). Molle et al (2009a:276), stressed the “remarkable continuity to 60 years of water policy centred on the ‘desert bloom’ promise”, but how it remained unfulfilled, maintaining that ideology and politics were the “overarching” drivers of hydraulic development, yet admitted that an important question remaining unanswered was why were governance shifts so hard to enact in Thailand and why was it seemingly not possible to implement “good projects” with “adequate safeguards, compensations, detailed assessments of future impacts and strict screening”? I believe this thesis has gone some way to answering this apparent conundrum by widening understandings of ideological formations to include irrigation development itself.

I have argued that this phenomenon of a fixed regional irrigation development discourse speaks to the nature of an ideologically-driven hydraulic society and thereby challenges the evolutionary and stagist interpretation of Asian water resources development paradigms suggested by Barker and Molle (2004; 2005). Rather, it invokes a more primordial and recursive interpretation of modern Thai history (Fong, 2009), where supply-led and infrastructural construction-based approaches to irrigation development remain the *de facto* norm, despite much vaunted discursive shifts by some state and international actors calling for sectoral reform, such as decentralization and participation narratives. The evidence collected suggests that these notions are purely rhetorical and remain intangible to ordinary

water users and irrigators under regimes of unaccountable water resources development and management that remains controlled by a top-down hydraulic state. The elite interest groups are no less focused on capturing, diverting, storing, and controlling water resources or simplifying complex landscapes through irrigation development strategies in the Northeast today than they were half a century ago, but in fact, now enjoy a greater monopoly as the grip of hydraulic society has tightened.

11.3 Irrigationism and state domination

Irrigation development has, without a doubt, formed a key part of post World War Two statemaking efforts in Thailand, but is under-recognized for its seminal role in helping to settle, stabilize and command the problematic periphery. Public state-led and sanctioned irrigation development (hydraulic agriculture), as opposed to more atomistic, independent and household-level agricultural water resources management modes and technologies (hydroagriculture), has progressively become one of the grandest, most complex, ongoing social engineering experiments in modern Thailand that defies easy rationalization for the extent of its reach into multiple aspects of rural society, materially and discursively. Irrigated areas have spread inexorably across Northeast Thailand (the region with statistically the least irrigation coverage) over the last 60 years, but not necessarily in accordance with the visions of nationalistic state irrigational planners, policy makers and engineers. Much of the expansion is measured in terms of total water storage capacity and theoretical command area coverage (its own indicators of “success”), rather than in terms of actual areas cultivated or numbers of farmers empirically practicing irrigation. So on paper it may appear that there is constant growth in irrigation provision (see Fig. 1.1), but official data can be misleading (often deliberately so, perhaps) and empirical evidence from the field suggests a quite different picture of irrigational use. Rural people nationwide, irrespective of whether an area is irrigated or not, have been steadily exiting agriculture for other sectors of the economy as part of an ongoing agrarian shift for decades (Rigg and Ritchie, 2002:4; Rigg, 2003). In Sakon Nakhon province, less than one percent of small and medium scale irrigation works were being used in the 2009-10 dry season. There was no evidence to suggest that vast expenditure on irrigation infrastructure or utopian irrigational discourses was likely

to retain rural people in farming livelihoods for the foreseeable future, given the economics of agriculture in relation to diverse off-farm employment options (both at home and abroad), the aspirations of Thai youth and inherent risks of agriculture, even under irrigated conditions (Molle and Floch, 2007) (with the risks often exacerbated by state agro-managerialism and hydraulic control strategies).

From a purely rational economic viewpoint, it would be difficult to justify the Thai state's continued practice of funnelling fully half of the entire Ministry of Agriculture and Cooperatives' budget to the Royal Irrigation Department, mostly spent on irrigation hardware development, *not* water management as such. Indeed, Fan et al (2004) in a study of various public investments found that irrigation had the smallest impact on both rural poverty reduction and agricultural productivity growth. I have argued through the thesis that the answer to this paradox lies not in instrumental, rationalistic explanations but requires gaining a better appreciation of underlying cultural and ideological motives for irrigation development, which I have termed as *irrigationalism*. I maintain that it bears many of the hallmarks identified by Adams (1991) as an ideology of "irrigationism" prevalent in certain nations of Sub-Saharan Africa, but is less strongly related to externally derived ideological influence than suggested by Adams. Rather a key difference is that irrigationalism is tied up with primordial notions of Thai nationalism and monarchy, embedded in discursive constructions of "Thai-ness" and an imagined community (Anderson, 2006), which make it more potent than Adams' conceptualizations around the desire by national leadership for modernization and a "technofix" solution to development challenges.

The irrigation development discourse in Thailand, as with India (Mollinga, 2010), has tended to become embroiled in domestic debates, characterized by strong polarization and dichotomies, between mainstream and critical perspectives to agricultural water resources management that has mostly overlooked ideology as a key underlying driver of development. Irrigation development may be considered a "privileged solution" (Moris, 1987) that relies on a state and national elite "sanctioned discourse" (which I understand as equivalent to ideology) for its legitimacy, in the words of Allan (2002:182) "constraining those who may wish to speak or think *outside* of the discursive hegemony".

Irrigation development in Thailand fulfils some key definitional elements of an ideology on several abstract levels, as argued in Chapter 5. One interpretation of ideology relates to a more original Marxist usage where it is viewed as a tool of the bourgeoisie to subordinate the weaker and more marginalised groups in society. Under such an interpretation, irrigation development could be seen as a manifestation of power held by elite groups at the core and used to gain control over the periphery, especially rural people. In a more nuanced interpretation, I would argue that irrigationalism has congruence with all six strategies that identify an ideology proposed by Eagleton (2007), noted in Chapter 3, Section 3.1.1. The dominant strategic group associated with irrigationalism promotes a system of values and beliefs that are used to justify and sustain it; such core beliefs (e.g. the “poor and dry” Isaan narrative) have been systematically *naturalized* and *universalized* so as to render it self-evident and commonsensical; the hydraulic state apparatus will attempt to *denigrate* counter-narratives and *exclude* rival forms of thought that challenge the dominant narrative in myriad ways, thus silencing opposition ; and at the same time it will *obscure* social reality in ways convenient to itself, most especially the flow of benefits arising from irrigation development accumulating at the centre and the social control aspects that monopolistic hydraulic development affords the state. Furthermore, it obscures the fact that villagers as voters are presented with extremely limited choices concerning irrigation development pathways and are poorly served by the misleading binary classification of agricultural land into “irrigated” and “rainfed” categories, based on assumptions that the state has sufficient financial resources and there is excess water available to convert the latter category (seen as backward and underdeveloped) into the former (seen as inevitable utopian end).

There is also a nationalistic sense in which irrigation development is equated with notions of Thai national identity (i.e. “Thai-ness”) and civilization, ordained to instil a sense of lost tradition, idealized communalism embodied in the “*muang fai*” narratives, utopianism and an agriculturalism linked to contested notions of an idyllic rural past under benevolent and sacred monarchs (see Chapter 5, Section 5.3.2). Such narratives are ironically strengthened by misinterpretations of the hydraulic society thesis and state roles, which promote a dominant view of local or “indigenous” irrigation development technologies being historically evolved from farmer agency and self-interest (e.g. Stargardt, 1992; Stott, 1992). These ideological

factors are argued to partially explain the stubborn persistence in society of adopting utopian notions of an irrigational-based future for the Northeast's countryside, even in the face of patent technological, institutional and economic failures of existing state irrigation systems at all scalar levels (Chapter 8). The economic and ecological absurdity of irrigation development pathways becomes all the more stark when one witnesses government subsidized dry season rice (the most water thirsty staple crop), being the principal crop promoted under recent irrigation expansionism in the supposedly water scarce Northeast. I argue that the dominant narratives justifying irrigation development in Thailand have been used as a means to ".....carry and disperse forms of power and control into the everyday lives of the populace. That is, they normalise certain practices, habits and routines whilst creating deviations and perversions out of those that they exclude" (Layder, 2001:101). Put simply, irrigation development constitutes part of the Thai state's "regime of truth", i.e. the types of discourse which it accepts and makes function as true (Foucault, 1980). Such Foucauldian perspectives of irrigation development, seen as a "technology of power", allowed the monarchy far greater "sovereign power" and the state more disciplinary power (including the use of coercive force to liquidate those it saw as obstructing its aims), than in its absence under traditional hydro-agricultural farming patterns. As the case of LNOIP illustrates (Chapter 8, Section 8.3), state repression and violence seemed to work hand in hand with irrigation expansion in first bringing under control the previously rebellious populace, and then subjecting the people to increased disciplinary measures (cf. Ertsen, 2008), partly by providing opportunities for vastly improved surveillance of villagers and enrolling them in state "projects" (every canal has a road running alongside it, built originally for ease of use by officials, not farmers). Indeed, in a close parallel, Turton (1986:43, citing Hirsch, 1985) noted how the physical organization of roads and houses in resettlement villages in Central Thailand was laid out for "ease of administration" and to allow village officials "to watch over everyone", alongside many subtle ways in which villagers resisted such state domination (Hirsch, 1990).

The dogmatic, instrumental and technocentric dominant view held by state hydraulic bureaucrats and associated elite actors tends to be one of creating neatly ordered, grid-like, faux-communitarian forms of irrigation development involving a high degree of social control and state discipline (that entails various types and processes

of coercion and consent). Irrigation development in Thailand exemplifies what Scott (1998:4) has referred to as the “ideology of high modernism” – it entails self confidence about scientific and technical progress, the expansion of production, the supposed satisfaction of human needs, the mastery of nature, and “above all, the rational design of social order commensurate with the understanding of natural laws.” As with a religious faith, this irrigational high modernism has been “uncritical, unskeptical, and thus unscientifically optimistic about the possibilities of the comprehensive planning of human settlement and production” (Scott, 1998:4). When embedded within the administrative reordering of society and nature beloved of Thai state irrigation development planners and joined to a third element – “an authoritarian state that is willing and able to use the full weight of its coercive power to bring these high-modernist designs into being” - does this combination become “potentially lethal”²⁶², argues Scott (1998:5). While these elements were demonstrably brought together and reached their zenith under the brutal military regimes of Sarit and Thanom in the 1960s and early 70s, when many of the largest storage dams and irrigation schemes were built through coercive means that required the full weight of state-sanctioned force to repress local resistance (refer to Section 8.3.1), it is not entirely apparent that the repressive hydraulic state of that era has been entirely renounced in the present era of *lèse majesté* prosecutions, threats of military coups and multiple methods employed to silence dissenting voices, including unsolved murders of many environmental activists in recent years (Chang Noi, 2009).

Away from the discourses of state utopian planning and high modernist visions, the empirical model of usage and adoption of irrigation technology that has emerged is one of individualistic and atomistic irrigation development (e.g. individual pumps and anarchic local irrigation methods) rather than the normative and populist communitarian image, suggesting a widespread rejection of the top-down, state-controlled model of hydraulic control in the Northeast. However, the state does not recognise these forms of “anarchic” agricultural water management as “irrigation” under its own narrow classification system, as it insists on classifying all irrigation technologies and practices outside of its own projects as “rainfed” agriculture. These

²⁶² Scott (1998:7) makes the argument that “certain kinds of states, driven by utopian plans and an authoritarian disregard for the values, desires, and objections of their subjects, are indeed a mortal threat to human well-being”, and not only referring to totalitarian states.

automatically become targets of the hydrocracies for conversion to officially “irrigated” status, thereby allowing the imposition of an external, hydraulic order. On paper, due to the artificial and false methods of system accounting adopted by the RID, as the main arbiter of irrigation data, irrigated areas are presented to expand year on year, perhaps as a strategy to ensure the maintenance of treasury funds flowing to its bloated hydraulic construction machine. But even on the ground, in some locations like the Lower Nam Songkhram Basin, unofficially irrigated areas have boomed in recent years based primarily on atomistic irrigation (Chapter 8, Section 8.5), stimulated by a confluence of economic and political factors that have encouraged the conversion of floodplain land to dry season rice cultivation, but without RID intervention. Increasingly, the rainfed areas of Isaan are becoming battlegrounds for dominance between the RID and DWR striving to implement their broadly similar, but competitive irrigation “mega-project” models (refer to Chapters 7 and 9).

Irrigationism, as I have argued in Chapter 5, meets the basic criteria for what Wiener (1972) terms an “ideological problem solving attitude” in society, which involves basically socially-conditioned response patterns, as opposed to a dichotomous “analytical problem solving attitude” to development (a “pragmatic approach”). The ideological approach represents a basic attitude to problem solving, that is rooted in the systematic application of state sanctioned principles (i.e. utopian visions of “greening” the region and solving naturalized drought-linked poverty via supply-led, technocentric, top-down development approaches), to an intentionally highly simplified planning space. Wiener (1972:27) notes how such ideological tenets (national, religious, moral or political) are often adopted “uncritically from an irrelevant past.” In this sense, irrigationism in Thailand is very much an ideology that links a mythical agricultural past to a utopian future, and in this sense it is similar to the centralized system of water management, allocation and development employed by the state of Israel under the ideological tenets of Zionism (Kartin, 2001; Lipchin, 2007). However, Wiener neglects to consider the crucial role that unequal power relations play in sustaining ideologies like irrigationism for producing exploitative social conditions. Using tools of discourse analysis, it has been possible to show that irrigationism, as a sub-set of nationalism, monarchism and developmentalism, has been used by Bangkok-based elites to dominate and exploit

subaltern “others” on the periphery of the state for over a century (Winichakul, 1995), but the process has reached its zenith during the long reign of the present king.

This process of systematic domination by the core over the periphery of the state goes far beyond irrigation development strategies alone, but extends into other hydraulic and non-hydraulic infrastructure construction (e.g. flood control, hydropower and road construction), which all form integral parts of Wittfogel’s (1957) concept of hydraulic society, marked by its “great builders”. Irrigationism and related dominant discourses of the centre are but one indispensable means by which unequal power relations propping up Thailand’s hydraulic society are maintained and reproduced.

11.4 Modern hydraulic society in Thailand

This thesis strongly supports Hunt et al’s (1976:397) contention that irrigated agriculture “is a resource of great structural potential; it is closely linked with major features of the social organization, closely linked with differential power, and embedded in the local-national linkages of states.” I have argued that the planning, design, funding, construction and, in most instances, operation and maintenance, of hydraulic infrastructure at all scales in Northeast Thailand has become the pre-eminent domain of the state, which commands an agro-managerial and hydraulic development monopoly in terms of water resources control. The fieldwork revealed that even relatively small-scale irrigation works in the Nam Songkhram Basin (e.g. Nong Saeng and Huay Wang Rua) were state-led development interventions that reflected the interests of centralized, technocentric and instrumental hydrocracies and associated political and business elites over the interests of direct water users, who were essentially subordinated at every stage. In other words, the state maintains a monopoly position over irrigation system development and water allocation decision-making of public systems, with farmers relegated to a largely passive role in management, above the level of the farm turnout. The practices which the state mistakenly classifies as “rainfed farming”, but Wittfogel would have classified as “hydro-agriculture” (including the areas of household and community-level managed wet rice paddy which make up the majority of the Northeast’s arable land), are the

chief targets for conversion into the state-controlled hydraulic agriculture paradigm and subject of increased contestation. All irrigation systems encountered in the Northeast that are officially classified in scalar terms as “small”, “medium” and “large-scale” projects are essentially state constructed artifacts, but have frequently been misinterpreted by external observers as representative examples of local co-management adaptations or communal irrigation (a not uncommon error made by anthropologists rejecting Wittfogel’s theories, notes Price (1994)).

This thesis is not the first to contend that Thailand represents a modern variant of a hydraulic society, but rather just provides a regional reinterpretation for the present context and adds flesh to the bare bones of Wittfogel’s half century old claim. It has attempted to address some of the uncertainty raised by Wijeyewardene (1973:100) about what this “fact” implied for Thailand’s development paradigm, given his belief that irrigation development was the “most spectacular manifestation” of the modern state’s ideology of (and pre-occupation with) national development and national security. I have argued that in line with Wittfogel’s hypothesis, the Thai state occupies a position of unrivalled operational leadership and agro-managerial control, through its virtual monopoly of the construction of productive and protective hydraulic works, including irrigation systems. As such, it has been able to simultaneously cajole the rural labour force into its scheme of irrigation infrastructure development, initially through corralling villagers as manual labour in the hydrotopian schemes of the 1960s and 70s under successive military dictatorships when whole communities were uprooted in the name of irrigationalism (reminiscent of some of the schemes of state simplification and legibility raised by Scott (1998) in Africa), but as labour costs rose and the availability of earth-moving machinery became more prevalent, subsequently switching the control strategy to co-optation of rural voters²⁶³ through the ballot box (the “*democrasubjection*” mentioned by Connors (2003)) and other ideological means to legitimise its semi-authoritarian rule in a modern hydraulic society, with a concomitant absence of effective societal checks on the power of the state.

The model of a hydraulic society I suggest applies to Thailand, proposes a core centered on Bangkok as the seat of state authority, with peripherally located regions

²⁶³ Direct and indirect vote buying by politicians is perceived to be most serious in the Northeast, according to Chang Noi (2009).

showing differentially weaker subservience to and resistance against the core, but are in a transformational process of gradually being drawn in to the central hydraulic polity. Indeed, Molle's empirical study of the Chao Phraya Basin seems to support this hierarchical model, without specifically identifying it as a hydraulic society, stating in the conclusion, "[I]nteractions are also spatially hierarchized: Bangkok tends to dominate the delta, the delta tends to maintain (with some difficulties) its privileged access to water in the basin and to impose its logic to ethnic minorities in the north, and the basin tends to expand its grasp on the resources of neighbouring basins and countries" (Molle, 2006:17). This present research argues that Thailand qualifies as a modern hydraulic society (cf. Evers and Benedikter's (2009a) claims for the Vietnamese Mekong delta), tends to conform with Wittfogel's classification schemata as a "Loose 1 (L1 + prot)"²⁶⁴, with a compact hydraulic core represented by the lower Chao Phraya delta. The Northeast, by comparison, represents a marginal, spatially discontinuous variant of the hydraulic society (refer to Chapter 2, Section 2.2.2).

Over the last sixty years or so (i.e. the developmental era), the central state has persistently attempted and largely succeeded in incorporating more marginal space (basins and administrative regions) into the folds of the hydraulic society by increasing hydraulic density. The furthest sub-margins of the hydro-ecologically and socio-politically "problematic" Northeast (such as the Nam Songkhram Basin) were some of the final areas to be incorporated into the core's sphere of influence, and initially offered most resistance. From the 1960s on (i.e. marked by the construction of Lam Nam Oon Irrigation Project and other large-scale hydraulic infrastructure), the central state (assisted initially by the US development industry and military complex) used overtly authoritarian and coercive means (see Chapters 5 and 7) to subordinate the people and bring such marginal areas as the Nam Songkhram into the hydraulic polity of Bangkok, gradually switching to more ideological strategies as time progressed. The state and allied strategic groups achieved this feat in a complex and multi-layered process of domination, using a mixture of coercion, ideology and hegemony, but not without meeting degrees of resistance and

²⁶⁴ A "loose" hydraulic society is one in which the hydraulic agriculture, "while lacking economic superiority, is sufficient to assure its leaders absolute organizational and political hegemony" (Wittfogel 1957:166). The addition of + prot, refers to the relatively strong development of protective hydraulic works (referring principally to flood protection), as opposed to productive (i.e. irrigation infrastructure) alone.

opposition from both human and non-human agents²⁶⁵. Indeed, the Northeast's topography, hydrology, geology, ecology, even aquatic biota (Sneddon, 2003a), have conspired to partially thwart the process of socio-ecological transformation precipitated by the hydraulic overlords, as much as local resistance to large-scale infrastructure development.

Rather than view the Thai hydraulic state as a monolithic entity, it is more helpfully conceived as a hydra-like beast, with multiple heads and far-reaching tentacles of influence. As Wittfogel asserted, historically hydraulic societies tended to be very resilient to internal challenge and able to reproduce themselves over long time periods: "[D]ominated by its monopoly bureaucracy, it continued to muster the technical and intellectual skills necessary to its perpetuation" (Wittfogel, 1957:422). Further, Wittfogel believed that there would be "no independent centres of authority capable of checking the power of the hydraulic regime" (Wittfogel, 1957:102) and that any freedoms in society would be "politically irrelevant". To survive and strengthen its symbolic and discursive authority during the past sixty years, the Thai hydraulic regime has become adept at co-optation or suppression of rival discourses and agents that challenge its supremacy. This it has achieved partly through means of "strategic groups" formation (aka discourse coalitions), as also seen with the case of Vietnam's hydraulic society (Evers and Benedikter, 2009b). This research has suggested that the most powerful strategic group in Thailand has been comprised of a five sided alliance of actors drawn from the military, monarchy, hydraulic bureaucracies, politicians and private enterprise, especially certain favoured construction companies. This extends the earlier notions of "iron triangles" (Worster, 1992), or "iron quadrangles" (Molle, 2008b; Molle et al., 2009d) of actors, and suggests these models are inadequate in explaining hydraulic power relations in Thailand's case, which is better represented by adding a fifth dimension, namely the monarchical institution. I have termed this formation a "golden pentagon" of hydraulic interests (see Fig 11.1 below). Furthermore, it supports the view of Connors that central to the problem of understanding Thailand's modern ambivalent state is appreciating the persistence of authoritarian power in the military and

²⁶⁵ In this post-structural political ecology perspective, nature has been viewed as one amongst many agents that actively resists human domination.

monarchy as part of the present balance of power relations attempting to maintain the status quo.

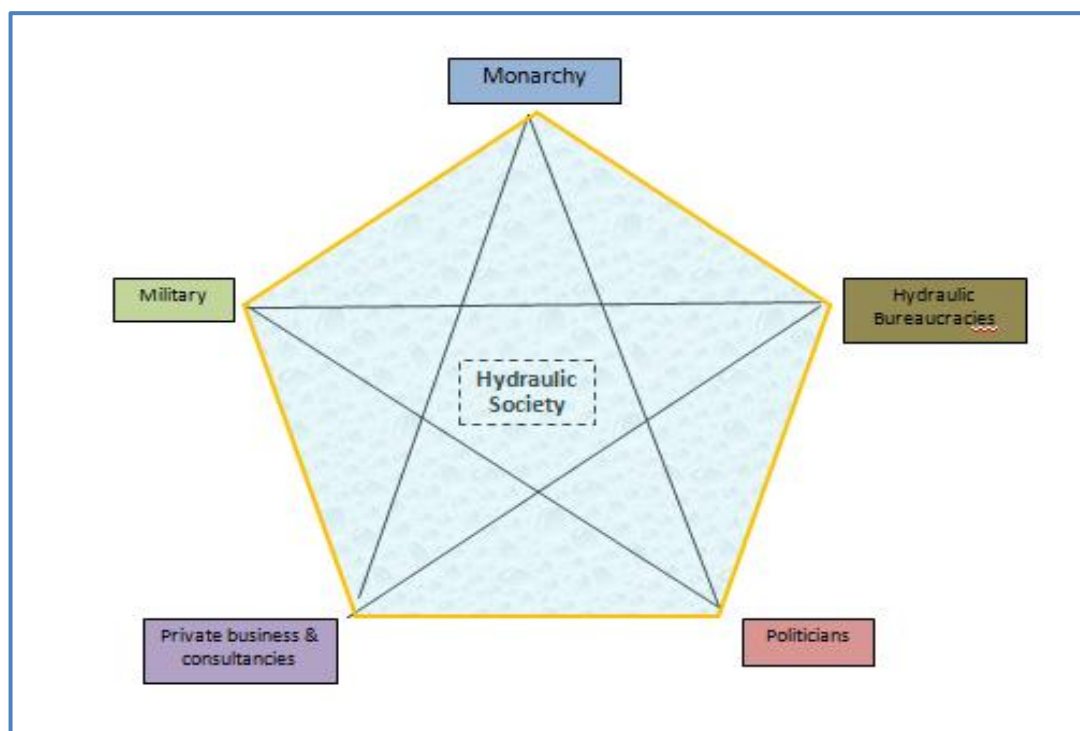


Figure 11.1 Conceptual diagram to illustrate the five most important strategic agent groups in Thailand that forge alliances at the national level to perpetuate the staying power of the hydraulic society, via maintaining a discursive web of mutual interests.

Detailed analysis of the more complex configuration of inter-connecting power relations in the Thai hydraulic society suggested by the preliminary heuristic above, goes beyond the scope of the primary objectives of this thesis, but invites further research and critique. At this stage, I simply suggest that these five actor groupings work together in “synergistic relationships” in which “the ways flows of water are created or modified by water infrastructure are intertwined with flows of power and influence, often manifested in the form of political or financial benefits, whether private or collective” (Molle et al., 2009d). Figure 11.1, in reality conceals the existence of far more complex power relations and overlooks reference to scalar or temporal considerations. It also conveys little about the nature of each of these actor groups and the interests and power struggles that occur in the “everyday politics of water resources management” (Mollinga, 2008) occurring within each group, all of which requires further elaboration in future. However, the position of the monarchy

at the apex of the pentagon is not coincidental and has constituted one of the major arguments running through this thesis.

11.5 Role of the king and network monarchy

A key characteristic of hydraulic society, according to Wittfogel, was the existence of an absolute ruler at the pinnacle of a hierarchy, whose power was total and combined “supreme operational authority and the many magical and mythical symbols that express the terrifying (and allegedly beneficial) qualities of the power apparatus he heads” (Wittfogel, 1957:305). The key value of an ideal type of “oriental despotism” proposed by Montesquieu was said to be fear, where the ruler relied on religion rather than law, and the entire system was essentially static because of the dominant role of customs and taboos (Pye, 1985:8). Both observational evidence from the field and analysis of multiple narrative texts suggests that the modern irrigation development paradigm in Thailand has to a large extent, been profoundly influenced by and in some cases directly reflects, knowledge constructions and narratives propagated by the current monarch, King Bhumibol. That the linkages between strategic groups or networks of elite actors that control and manage the public discourse of hydraulic development has not been comprehensively examined to date beyond a few case studies (e.g. Sneddon, 2000; Molle, 2003, 2006; Floch et al., 2007), is perhaps partial testimony to the venerated and sacrosanct position of the present monarch in a rigidly patriarchal and hierarchical society (Jacobs, 1971; Hewison, 1997; McCargo, 2005; Fong, 2009; Ivarsson and Isager, 2010). However, the discursive agency of the king as an individual at the apex of the Thai state and hydraulic society structure is some way from the benevolent paternalistic image portrayed in popular narratives, but rather has been propped up by a vast range of coercive and ideological tools lying at the disposal of the bureaucratic state forces. The sovereign power (Foucault, 1980) held by the monarchical institution acts as an effective means of silencing dissent or resistance, by relying on the extensive use of police, judicial, military and paramilitary forces for coercion of non-governmental agents in the past (sometimes used in facilitating the implementation of “royally-initiated” hydraulic infrastructure projects) and more recent use of repressive *lèse majesté* laws to enforce public

silence, academic self-censorship and ensure the official discourse prevails (Streckfuss, 2010). Mostly, however, compliance is obtained by more consensual hegemonic forms of power.

There is little doubt that the present monarch has played a definitive role in moulding the water resources development and management discourse of Thailand and could be considered an archetypal “hydraulic ruler” and chief ideologue of hydraulic society (see Chapter 10, Section 10.7). The thesis has demonstrated that a large proportion of the king’s personal authority and legitimacy has derived from a material and symbolic reputation as a hands-on water resources engineer, expert, designer, manager, inventor, and even mythical controller of rainfall without peer in the land (and beyond). Indeed, a meticulous process of knowledge construction has been conducted by the hydrocracies, the Public Relations Department and associated royal statecraft bodies to portray him as a hydro-social engineer and manager without parallel, “The Great Engineer”, “Royal Rainmaker”, “The Father of Water Management”, highlighted in Chapter 10. His personal and intellectual interest in water resources development from an early stage of his reign has had profound implications to the ideological and discursive terrain of Thailand’s irrigation development paradigm over the last half century. Bhumibol surely deserves the ironic epithet first given to the early twentieth century Dutch irrigational protagonist van der Heide by King Chulalongkorn – “The King of the Waters” (Brummelhuis, 2005) - more than any other Thai monarch before or since.

There is a striking convergence between contemporary national water resources development policy and planning discourse with the king’s personal discourse on water resources management, often expressed through the medium of annual birthday sermons. I contend that the royal stamp on water resources management discourse can be found throughout state and non-state organization narratives, but most especially within the development narratives of the powerful “black box” RID and its newer rival, the DWR. The royal discourse on water management is also discernible in the National Water Policy and successive National Economic and Social Development Plans (most recently with regards to promotion of Sufficiency Economy principles and the IWRM paradigm), in addition to justifications employed for many hydraulic development projects, beginning with the Bhumibol-inspired Green Isaan Project discussed in Chapter 7, but also its later clones. Simultaneously

with the large-scale hydraulic technologies and schemes, the king's discursive tracks and traces are visible within the small-scale hydraulic interventions that are often the joint preserve of state agencies and civil society organizations (in another powerful discourse coalition), such as bulk-applied *fai maew* weirs, *gaem ling* flood capture reservoirs and on-farm ponds. This colonization of hydraulic development discourse across scales demonstrates how the king's material and symbolic influence has effectively neutralized independent centres of authority capable of checking the power of the hydraulic regime, as predicted in Wittfogel's hypothesis, to create a form of "beggars' democracy", where total social control is unnecessary for its perpetuation (Wittfogel, 1957:112).

The powerful hold of the hydraulic state over its subjects, via symbolic use of the monarchy, is likely to remain internally resilient for as long as irrigation water "*chonla-prathaan*" is treated as a "gift from the king", rather than an inalienable right under law (Molle, 2003). This partly explains the marked reluctance of lawmakers, bureaucrats and politicians to pass the draft Water Act through parliament, which would require the introduction of irrigation water fees and thereby change the fundamental nature of the relationship between the service provider (the state) and the receiver (the farmer/irrigator) of the water. The present arrangement of granting the farmers free water gifted from a benevolent king, is rather more advantageous to those in control at the core as it maintains the receiver in a state of subservience where he/she has to politely beg for water from the state (or politician), as a beggar is grateful for alms from a benefactor, but instinctively knows he/she can be arrested or sanctioned at any moment, should he/she have the temerity to complain or resist. But if farmers were required to pay for water, then they might start to feel more empowered to demand a better service from the RID (or other state agency) and the whole balance of power would shift from state to peasant, which would be anathema to the hydrocratic elite's present interests of command and control. Hence, the strong resistance shown by the Thai state to external efforts by neo-liberal institutions like the Asian Development Bank and the World Bank to make irrigation water an economic good and charge farmers for the commodity and related irrigation service (Molle, 2007b). Ironically perhaps, state interests in this regard have been protected by civil society organizations that are ideologically opposed to commodifying water resources.

It has been suggested that Figure 11.1 may be useful for conceptualizing the basic web of relations linking five main strategic groups involved in the maintenance of hydraulic society, with the monarchy as the most significant institution, firmly headed by the semi-divine King Bhumibol, but it does not capture the layers of scalar complexity and temporal dynamics. McCargo (2005) argues that Bhumibol is far more than a figurehead monarch, but constitutes the central component of a novel mode of governance he terms “network monarchy”. He stresses the active involvement of the king in the political process, with the network reaching its peak of authority during the 1973-2001 period, after which some of its earlier powers started to wane with the emergence of a rival network under Thaksin Shinawatra. In Chapter 10, I integrated Evers and Benedikter’s (2009a) concept with that of McCargo’s (McCargo, 2005) “network monarchy” to argue that there is reasonable evidence to conceive of a more resilient social formation, namely “hydraulic network monarchy”, which is instrumental in preserving the authority and control of the monarchy and the hydraulic society over which it presides (Section 10.10). It makes it clear that for the network hydraulic monarchy to function effectively requires a system of proxy actors and agencies (the network), who conduct the real material and ideological work on behalf of the monarch, extending from the core to the margins of the state. Although the extent to which the king’s reign can be considered authoritarian is open to debate and interpretation, it has definitely not been totalitarian according to Wittfogel’s definition. Hence, I liken his role as equating more closely with that of a hydraulic “high priest”, presiding over a loose (even crumbling) hydraulic society.

11.6 Competing hydraulic bureaucracies

Vital to the organization and maintenance of the hydraulic state is the supporting role of the agro-managerial bureaucracies (Wittfogel, 1957) or powerful state “hydrocracies” (Molle et al., 2009d). At the forefront of the hydraulic mission and symbolizing state power, in many countries they have been obliged to reinvent themselves or face reform (usually deflected reform) due to internal and external challenges, argue Molle et al. (2009d). In Thailand’s case, the main challenge has been internal, and expresses itself as political rivalry both between hydrocracies and

with other state bureaucracies, that connects to rivalries between powerful political factions and *phak phuak*. Following Sneddon (2003b) and Floch and Molle (2008a), in Chapter 9 I have documented the competition that emerged between the Department of Energy Development (DEDP) and the RID over implementing the contentious Khong-Chi-Mun irrigation project in Northeast Thailand and then, following the dissolution of the DEDP and replacement by the semi-regulatory Department of Water Resources (DWR), the new battles that have emerged with RID to implement each hydrocracy's variant of Thaksin's multi-billion dollar and aspirational Water Grid project (see Section 9.2.4 and Fig. 1.1).

I have argued that the RID and the DWR, each strategically allied with political factions and construction industry groups that essentially compete with one another both materially and discursively at multiple spatial levels, leading to serious over-building of water resources infrastructure in already closed or near-closed river basins. The Water Grid project is the most visible manifestation of this competition at the national level, but the rivalry is detectable right down to the village level, which also become dispersed micro-battlegrounds for their agency. Both agencies may be viewed as national repositories of the utopian fantasies for cabals of hydraulic and social engineers. They both subscribe to an ideology of irrigationalism, although the RID presents itself as the more zealous church, drawing strongly from narratives claiming historical and royal legitimacy and material control of large and medium size systems nationwide. The RID vastly outguns its rival in terms of manpower and budget at present, but this could potentially change in future. Using tools that pay rhetorical lip-service to neo-liberal governance terms like participation and decentralization, both agencies persist with an increasingly contested hydraulic mission of infrastructure construction in an ever-restricted planning space. Peripheral arenas like the lower Nam Songkhram Basin are proving the final frontier for the hydrocracies' ambitions, which like the agricultural frontier, is heading towards basin closure. Increasingly, the hydrocracies are turning their attention to the "wasted" water of Laos' rivers or damming the Mekong itself, as the next hydraulic frontier to exploit, in fulfilment of old utopian dreams of greening Isaan (Molle et al., 2009a; Floch and Blake, 2011).

As both institutions rely chiefly on infrastructure construction as their core activity (despite initial promise by DWR that it would limit itself to national water resources

policy making, planning and legislation), they are obliged to hunt for new sites to socio-ecologically transform. As they have been virtually freed from the constraints of external evaluation of their respective projects, especially since the withdrawal of foreign aid assistance to the Thai water sector in the 1990s, then it seems they can afford to be lax with cost-benefit calculations with little fear of contradiction. Evidence gathered in Sakon Nakhon Province, suggests that the provincial RID office was practicing routine gross exaggeration of irrigation command areas and beneficiaries of small projects (perhaps in order to make patently uneconomic projects appear to superiors more beneficial than the reality, so as to assure continued funding). The extent of this deception is unknown, but if the case of Huay Wang Rua, Ban Non Rua (see Chapter 8, Section 8.6) was typical, then it would suggest that the ratio of over-estimation of claimed potential irrigable area to that irrigable in practice, could be a factor of well over one hundred fold. The catalogue of poor water governance in the small-scale projects investigated also included bid rigging by front companies, lack of water user participation, no prior state agency consultation with water users, uncompensated tree and crop destruction by the contractors, inept building practices, lack of oversight and a host of other misdemeanours in the construction of a single small system. Startlingly perhaps, the same basic technical mistakes and ingrained institutional corruption were repeated and compounded at the same project site, despite the passage of nearly thirty years. Results from the field indicated that the RID was institutionally not learning from past malpractices and outright failure of its projects, as there was little fear of external scrutiny or sanction. In a hydraulic society fear lies with the people, not the state, which enjoys pre-eminence. This case illustrated the RID's closed institutional workings and pointed to an endemic culture of poor transparency and lack of accountability, even to other agencies in the same ministry. The evidence suggested that narratives of neo-liberal sectoral reform, "good governance" and progressive evolutionary models in Asian irrigation paradigms, are over-optimistic in the case of Thailand (cf. Barker and Molle, 2004). Such models tend to overlook the staying power of hydraulic society predicted by Wittfogel and indeed, the Thai case suggests that the state now enjoys greater control over hydraulic development at the periphery of the nation than at any time in the past.

11.7 Recommendations for further research

There are a number of areas of potential future research that are suggested by this study to be presently lacking or superficial. Firstly, the “hydraulic society” theory deserves further unpacking and interrogation in the light of modern water resources development paradigms, both domestically in Thailand, and perhaps just as importantly, neighbouring states in the Mekong region. This is an important task, I believe, given the increasingly inter-connected economies of the region and the efforts by Thailand as a regional hegemon, to extract natural resources and accumulate capital from neighbouring countries through interlinked energy and water grids. This would imply shifting up the research domain more from the level of “everyday politics”, to the level of “the politics of water policy in the context of sovereign states” and “inter-state hydropolitics” (see Mollinga, 2008), but without losing sight of the local processes of struggle and contestation against domination. Understanding the discourses of hydraulic development (e.g. hydropower, domestic water supply and flood control and not just irrigation development, for example) and the actors that sustain and counter them in different spatio-temporal contexts would be one top priority. Also, there is a need to examine the relations of power between the various actors in the hydraulic society model and ascertain the degree of agency of each, both historically and at present. For example, are the power relations amongst actors and actor groups nearer the core of the hydraulic society, say in the lower Chao Phraya basin comparable with those in irrigation systems located on the margins, such as the LNOIP?

There appears to be a patent need to precipitate research and analysis of “black box” hydraulic bureaucracies in Thailand, the most pertinent being the inscrutable Royal Irrigation Department, which quite remarkably has escaped serious institutional research up to now, given its size, longevity and power. One suspects this may be strongly related to its close association with the monarchy, but this factor alone seems an unsatisfactory explanation for the relative absence of critical analysis of this institution (at least in the English language), compared to say the Royal Forestry Department which has been exposed for some time to quite rigorous critique by

domestic and foreign researchers (e.g. Pye, 2005; Forsyth and Walker, 2008). As Molle et al (2009d) have pointed out, the internal dynamics of hydrocracies remains a heavily under-researched field worldwide. Therefore, gaining access to the inner sanctums of the RID (or the DWR) and studying it from an inter-disciplinary perspective, trying to understand its history, actor motivations, policy discourse and intra- and inter-agency politics, would be an invaluable contribution to addressing one of the most obvious gaps in Thai water resources governance research.

Closely linked to research on the RID, there is a clear need to bring the Thai monarchy and affiliated institutions (e.g. Royal Projects, Chaipattana Foundation) into the realms of being considered legitimate subjects of academic research, both structurally and at the individual actor level, to question further its role in producing, reproducing and transforming discourse and social relations around water resources development paradigms. Like the RID, the monarchy has thus far managed to escape serious political scrutiny and has become something of a “sacred cow” institution – considered untouchable and above criticism – which has neither served the purpose of sustainable water resources management nor the pursuit of intellectual freedom and ability to openly evaluate past paradigms, but rather has closed entire areas of legitimate research and debate, which may ultimately weaken the institution’s reputation and standing. To engage, researchers would need to be prepared to reappraise existing dominant discourse around irrigation and hydraulic development, to study water resources control from multiple perspectives that take into account power relations and diverse actors. This will inevitably mean consciously attempting to remove the barriers that have prevented the monarchy (and military) and related actors from being subject to a degree of open criticism. This will clearly not be a simple task given the prevailing political context and would likely require reform of the laws that presently prevent reasonable academic freedom of expression in Thailand, in particular Article 112 of the Criminal Code²⁶⁶.

²⁶⁶ Article 112 of the Criminal Code is one of three legal instruments pertinent to the crime of *lèse majesté* and prescribes punishments for violations of the crime thus: “Whoever defames, insults or threatens the King, Queen, the heir-apparent, or the Regent, shall be punished (with) imprisonment of three to fifteen years.”

Appendix A List of Recorded Interviews

Name	Position and Organisation	Date of Interview (dd-mm-yy)	Length of interview (mins)
State officials			
Sansonthi Boonyothayan	Recently retired chief of Sakon Nakhon Provincial Agriculture and Cooperatives Office, Sakon Nakhon	24-11-09	60
Satit Phiromchai	Senior Policy and Planning Analyst; Dept of Water Resources, Bangkok	5-1-10	45
Sratta Rangrawd	Director, Sakon Nakhon Provincial Irrigation Project, Sakon Nakhon	29-4-10	70
Pithak Chomphuchan	Director of Mekong River Basin Cooperation and Management Division, Department of Water Resources Regional Office 3, Udon Thani	7-5-10	71
Prasit Warnset	Director of Mun-Chi River Basin Cooperation and Management Division, Dept of Water Resources Regional Office 4, Khon Kaen	10-6-10	75
Jeddy Khotamitr	Chief of Sri Songkhram District Agricultural Extension Office, Nakhon Phanom	19-7-10	79
Pakawan Chofamane	Director of Thai National Mekong Committee, Dept of Water Resources, Bangkok	4-8-10	89
Manas Kamnerdmanee	Director of Public Participation Promotion Office, Royal Irrigation Dept, Bangkok	4-8-10	76
Domestic and International NGOs and civil society			
Montree Chantawong	Activist-researcher with Thai-based NGO, Towards Ecological Recovery and Regional Alliances (TERRA), Bangkok.	19-11-09	77
Laothai Nilnuan	Independent activist-researcher and Chairman of TAO in Lup Lao Sub-District, Sakon Nakhon	15-12-09	80
Hannarong Yaowalert	President of Thai Water Partnership and former NGO-activist, Bangkok	4-1-10	66
Dr Carl Middleton	Activist-campaigner for International Rivers, Southeast Asia office	5-1-10	22
Dr Apichart Anukularmpai	President, Thailand Water Resources Association, Bangkok (formerly member of National Water Resources Committee and engineering lecturer at Asian Institute of Technology)	4-6-10	90
International Development and Research Organisations			
Dr Thierry Facon	Senior Water Resources Management Officer for the FAO Regional Office for Asia and the Pacific (FAORAP), Bangkok	5-1-10	84
Fongsamuth Phengphaengsy	Water & Wetlands Coordinator, International Union for the Conservation of Nature (IUCN), Vientiane, Lao PDR	20-5-10	90
Dr Le Huu Ti	Chief of Water Security Section, Environment and Development Division, UN Economic and Social Commission for Asia and the Pacific	18-6-10	52
Dr Thanapon Piman	Senior Modeller, Basin Development Plan, Planning Division, Mekong River Commission, Vientiane, Lao PDR	18-8-10	84
Dr Andrew Noble	Regional Director, International Water Management Institute, Vientiane, Lao PDR	19-8-10	133
Dr Philippe Floch	Water Specialist, Asian Development Bank, Manila	20-12-10	40
Private consultants			
Erhard Floether	GMS Agriculture Development Specialist (semi-retired), Khon Kaen	13-3-10	147
Tony Zola	Independent agricultural development consultant, Bangkok	3-8-10	80
Academics			
Dr Kanokwan Manorum	Director of the Mekong Sub-Region Social Research Centre, Ubon Ratchathani University	12-1-10	74
Dr Prakob Wirojanagud	President, Ubon Ratchathani University, Ubon Ratchathani	12-1-10	58
Dr Srisakara Vallibhotama	Semi-retired history professor at Silpakorn University, Bangkok and public intellectual	9-4-10	103
Dr Surachai Wun-gaew	Research Centre Director, Centre for Peace and Conflict Studies, Chulalongkorn University, Bangkok	4-6-10	29
Dr Prasit Prakongsri	Director of Integrated Water Resources Management Research & Development Centre, Khon Kaen University, Khon Kaen	30-6-10	176
Dr Pinkaew	Senior Lecturer, Faculty of Social Sciences, Chiang Mai	4-3-11	59

Luangaramsri	University		
Dr Louis Lebel	Director, Unit for Social and Environmental Research (USER), Faculty of Social Sciences, Chaing Mai University	8-3-10	41
Dr Chayan Vaddhanaphuti	Director of Regional Centre for Social Science and Sustainable Development, Chiang Mai University	8-3-10	50
Politicians			
Pairoj Sukjai	Deputy Chairman, Nong Sa Plaa TAO, Nong Han District, Udon Thani	23-6-10	64
Sgt Major Amphon Khamwongsa	Deputy Chairman, Naa Hua Bor TAO, Phanna Nikhom District, Sakon Nakhon	25-6-10	47
H.E. Supachai Phosu	Deputy Minister for Agriculture and Cooperatives and MP for Nakhon Phanom (Bhumjaithai Party).	27-6-10	49
Boonhong Chaibin	Chairman, Tha Bor Songkhram TAO, Sri Songkhram District, Nakhon Phanom	20-7-10	65
Local leaders			
Sanguan Phosu	Ex-village chief, Ban Naa Phiang, Sri Songkhram District, Nakhon Phanom	27-5-10	90
Somboon Chaitamat	Deputy Chairman of Huay Wang Rua Water Users Group and RID volunteer	30-5-10	48
Boonthavee Boonsit	Ex-village chief, Baan Nong Sa Plaa, Nong Han District, Udon Thani	31-5-10	33

Appendix B Survey Questionnaire Design

A survey of the perceptions of members of the public about some water resources related issues in Northeast Thailand, to be used as part of the fieldwork of David Blake, PhD candidate at University of East Anglia, United Kingdom.

Introduction

“Hello, my name is (Name of Interviewer). I am a research assistant from Khon Kaen University, conducting a questionnaire survey on behalf of a PhD research student called David Blake from the University of East Anglia, England. If you agree, I would like to invite you to participate in this research study conducted as part of David’s PhD thesis data collection. It should take no more than about 15 minutes to complete.”

Purpose of the study

The purpose of this study is to collect information concerning Thai peoples’ perceptions and views about various aspects of water resources development and management in Northeast Thailand. The data collected will be used to inform a wider study focused on irrigation development in the Nam Songkhram Basin.

Prior Informed Consent Statement

Thank you for agreeing to take part in this research. In doing so, you understand that any information you give is strictly confidential and your answers will be used only for the purposes of Mr David Blake completing his PhD thesis and possible future academic research papers. All data will be securely stored and not used for commercial purposes. Furthermore, you participate voluntarily and are under no obligation to answer every question, and if you wish, you may terminate the interview at any point.

Interviewer	
Interview Date (Date/Month/Year)	
Interview Time (Start – Finish time)	
Location	

Standard demographic data collected prior to use of main questionnaire:

Name of person interviewed		
Sex	MALE	FEMALE
Age		
Highest educational qualification attained		
Present occupation		
Present domicile (District & Province)		
Birth place (District & Province)		

(NB: Each of above categories to be post-coded for later statistical analysis)

Main Survey Questions

(NB: respondents to be asked questions in order shown and full responses to be recorded. If respondent is not sure about the question or did not hear it properly, then clearly repeat the question, but in no circumstances invoke or suggest a response. Where boxes are used, please tick the answer in corresponding column)

Question 1. **When you hear the word “Isaan”, what does it make you think of?** (may list up to 3 answers)

- i.
- ii.
- iii.

Question 2. **What do you think are the primary development problems that affect the Isaan region?** (may list up to 3 answers)

- i.
- ii.
- iii.

Question 3. **What do you think are the main problems related to water resources management in the Isaan region?** (may list up to 3 answers)

- i.
- ii.

iii.

Question 4. **Do any of these water resources issues (mentioned above) affect you personally? If so, in what way/s?**

i.

ii.

iii.

Question 5. **In your own words, what do you understand by the term “drought”?**

Answer:.....
.....
.....

Question 6. **Do you think the following water resources issues are getting better, worse or no change over the last ten years?**

	Issue	Better	Worse	No change
6.1	Floods			
6.2	Droughts			
6.3	Domestic water supply			
6.4	Agricultural water supply			

Question 7. **If in your opinion drought is getting worse, what do you think may be the cause of this?**

Answer:.....
.....
.....

Question 8. **Do you think global climate change (global warming) may be to blame for changes in drought and flood frequency?**

	Response	Tick
8.1	Yes	
8.2	No	
8.3	Don't know	

Question 9. **Which economic sector do you think most contributes to water scarcity?**

	Economic Sector	Tick
9.1	Agriculture	
9.2	Industry	
9.3	Domestic water supply	
9.4	Other	

Question 10. **Do you think Thai farmers should be expected to pay the government for irrigation water?**

	Response	Tick
10.1	Yes	
10.2	No	
10.3	Don't know	

Question 11. **How strongly do you agree with each of the following statements?**

	Statement	Strongly agree	Slightly agree	Don't know/ not sure /neutral	Slightly disagree	Strongly disagree
		1	2	3	4	5
11.1	Isaan is the driest region of Thailand					
11.2	Isaan deserves more budget for water resources development than other regions					
11.3	It would be a good idea to withdraw water from the Mekong River to irrigate Isaan					
11.4	It would be a good idea to transfer water from rivers in Laos to irrigate Isaan					
11.5	In Isaan there are enough irrigation systems already, but what people need is better management of existing systems					
11.6	Powerful people in Thailand benefit the most from building more irrigation systems					
11.7	Politicians are able to win votes from policies that promise new irrigation systems to villagers					
11.8	The job of planning and managing water resources is more the duty of the government than the people					

Do you have any further opinions or comments you would like to make, having completed this survey?

Thank you for your cooperation in answering these questions. Your responses have been most helpful.

If you would like further information, then you are welcome to contact David through the following channels:

Address: David J.H. Blake, c/o Research Group for Well Being & Sustainable Development,
Faculty of Humanities and Social Sciences, Khon Kaen University, Amphur Muang, Khon Kaen,
40002

Tel: 087 0258 528

Email: djhblake@yahoo.co.uk

Appendix C Responses given to Questionnaire Survey questions, disaggregated by location and ranked according to importance

TABLE 1. Responses given to Question 1: “When you hear the word “*Isaan*”, what does it make you think of?” (respondents may list up to 3 answers)

Responses	Interview Location						TOTAL		Rank
	Khon Kaen ²⁶⁷		Bangkok ²⁶⁸		Nam Song ²⁶⁹				
	#	%	#	%	#	%	#	%	
1.1 Poverty; poor people	9	7.4	2	1.9	4	3.7	15	4.5	11=
1.2 Drought	29 (3=)	24.0	27 (3)	25.2	20	18.3	76	22.6	5=
1.3 Other climate-related characteristics	4	3.3	7	6.5	6	5.5	17	5.0	10
1.4 Physical landscape characteristics	7	5.8	10	9.3	3	2.8	20	5.9	9
1.5 Positive social characteristics	0	0	6	5.6	9	8.3	15	4.5	11=
1.6 Negative socio-economic factors	1	0.8	3	2.8	1	0.9	5	1.5	13
1.7 Culture and traditions	46 (2)	38.0	43 (2)	40.2	26	23.9	115	34.1	2
1.8 Agriculture & farming livelihoods	25	20.7	14	13.1	65 (1)	59.6	104	30.9	3
1.9 Language (Lao; Isan)	25	20.7	40	37.4	11	10.1	76	22.6	5=
1.10 Food and eating	79 (1)	65.3	70 (1)	65.4	53 (2)	48.6	202	59.9	1
1.11 Tourism and tourist attractions	9	7.4	9	8.4	7	6.4	25	7.4	8
1.12 Music & musical instruments	29 (3=)	24.0	23	21.5	30 (3)	27.5	82	24.3	4
1.13 Others	5	4.1	20	18.7	19	17.4	44	13.1	7

²⁶⁷ Khon Kaen location = inside Central Plaza shopping mall and at public bus station

²⁶⁸ Bangkok location = inside Lumpini Park, central Bangkok

²⁶⁹ Nam Song = Nam Songkhram village (Ban Nong Batao, Sri Songkhram District, Nakhon Phanom)

TABLE 2. Responses given to Question 2: “What do you think are the most important development problems that affect the Isan region?” (respondents may list up to 3 answers)

Responses	Interview Location						TOTAL		Rank
	Khon Kaen		Bangkok		Nam Song				
	#	%	#	%	#	%	#	%	
2.1 Education	63 (1)	53.4	40 (2)	37.4	14	13.3	117	35.5	2
2.2 Drought; water scarcity	37 (2)	31.4	49 (1)	45.8	56 (1)	53.8	142	43.0	1
2.3 Poverty; low income	36 (3)	30.5	31	29.0	46 (2)	43.8	113	34.2	3
2.4 Politics; governance	10	8.5	22	20.6	20	19.0	52	15.8	7
2.5 Climate & weather events	4	3.4	13	12.1	9	8.6	26	7.9	8
2.6 Environment related	12	10.2	13	12.1	8	7.6	33	10.0	9
2.7 Livelihoods and employment	30	25.4	37 (3)	34.6	45 (3)	42.9	112	33.9	4
2.8 Migration	1	0.8	10	9.3	10	9.5	21	6.4	10
2.9 Culture; religion; morality; family	4	3.4	2	1.9	0	0	6	1.8	12
2.10 Water resources management	0	0	5	4.7	4	1.2	9	2.7	11
2.11 Transport; communications	15	12.7	21	19.6	17	16.2	53	16.1	6
2.12 Others	3	2.5	38	35.5	38	36.2	79	23.9	5

TABLE 3. Responses given to Question 3: “What do you think are the most important development problems related to water resources management in Isaan?” (may list up to 3 answers)

Responses	Interview Location						TOTAL		
	Khon Kaen		Bangkok		Nam Song				
	#	%	#	%	#	%	#	%	Rank
3.1 Water scarcity problems (agricultural and domestic)	51 (1)	44.3	43 (1)	40.6	66 (1)	61.1	160	48.6	1
3.2 Insufficient or poor water storage sources (e.g. dams, weirs, etc)	25 (3)	21.7	28	26.4	26 (3)	24.1	79	24.0	4
3.3 Climate-related drought, unpredictable rainfall & unusual weather events	22	19.1	24	22.6	14	13.0	60	18.2	6
3.4 Water quality or pollution problems	22	19.1	38 (2)	35.8	1	0.9	61	18.5	5
3.5 Floods	10	8.7	7	6.6	16	14.8	33	10.0	9
3.6 Poor water management practice/knowledge at the local level	34 (2)	29.6	34 (3)	32.1	21	19.4	89	27.1	2
3.7 Poor irrigation & water delivery systems	20	17.4	21	19.8	45 (2)	41.7	86	26.1	3
3.8 Demand-side problems and conflict	4	3.5	1	0.9	5	4.6	10	3.0	12
3.9 Environmental decline e.g. biodiversity loss, watershed destruction or deforestation	6	5.2	12	11.3	11	10.2	29	8.8	11
3.10 Problems with tap water provision	16	13.9	10	9.4	6	5.6	32	9.7	10
3.11 State policy or project planning & implementation problems	20	17.4	10	9.4	10	9.3	40	12.2	8
3.12 Others	14	12.2	22	20.8	15	13.9	51	15.5	7

TABLE 4. Responses given to Question 4: “Do any of these water resources problems (mentioned in Q3) affect you personally? If so, in what way?”

Responses	Interview Location						TOTAL		
	Khon Kaen		Bangkok		Nam Song				
	#	%	#	%	#	%	#	%	Rank
4.1 Insufficient water for agriculture	26 (1)	21.5	11 (4)	10.6	48 (1)	45.3	85	25.7	1
4.2 Insufficient water for domestic consumption	24 (2)	19.8	12 (2=)	11.5	8	7.5	44	13.3	3
4.3 Pollution; poor water quality	16 (3)	13.2	10	9.6	3	2.8	29	8.8	5
4.4 Low agricultural productivity or crop failure	7	5.8	7	6.7	37 (2)	34.9	51	15.4	2
4.5 Floods or excess water in the rainy season	7	5.8	2	1.9	7	6.6	16	4.8	7
4.6 Forest destruction leading to drier rivers/streams	1	0.8	1	1.0	1	0.9	3	0.9	10
4.7 General environmental decline (e.g. erosion; less biodiversity, etc)	1	0.8	4	3.8	1	0.9	6	1.8	9
4.8 Economic reasons (e.g. more expensive water, loss of livelihood, migration, etc)	4	3.3	12 (2=)	11.5	26 (3)	24.5	42	12.7	4
4.9 Aesthetic and emotional reasons	1	0.8	4	3.8	4	3.8	9	2.7	8
4.10 Others	6	5.0	7	6.7	8	7.5	21	6.3	6

TABLE 5. Responses given to Question 5: “What do you understand by the term drought, described in your own terms?”

Responses	Interview Location						TOTAL		Rank
	Khon Kaen		Bangkok		Nam Song				
	#	%	#	%	#	%	#	%	
5.1 Insufficient water for domestic use (incl drinking water)	58 (1)	47.9	36 (1)	34.0	24 (1)	22.2	118	35.2	1
5.2 Insufficient water for agricultural use (e.g. plants don't grow, wilt or die)	22	18.2	25 (3)	23.6	52 (1)	48.1	99	29.6	2
5.3 Lack of soil moisture; cracked earth	10	8.3	20	18.9	9	8.3	39	11.6	6
5.4 Destruction of natural resources (incl forest loss)	28 (2)	23.1	31 (2)	29.2	39 (3)	36.1	98	29.3	3
5.5 Rain doesn't fall according to season or low rainfall	27 (3)	22.3	18	17.0	41 (2)	38.0	86	25.7	4
5.6 Unhealthy; unproductive; not enough to eat/use	3	2.5	9	8.5	4	3.7	16	4.8	8
5.7 A poor environment	1	0.8	1	0.9	2	1.9	4	1.2	9
5.8 Hot weather	10	8.3	15	14.2	8	7.4	33	9.9	7
5.9 Others	8	6.6	23	21.7	13	12.0	44	13.1	5

NB: Respondents could give several answers to this question, which were all recorded in the data. Most only gave one single, simple definition however.

TABLE 7 Responses given to Question 7: “If in your opinion, drought is getting worse, what do you think may be the cause of this?”

Responses	Interview Location						TOTAL		Rank
	Khon Kaen (n = 72)		Bangkok (n = 43)		Nam Song (n = 29)				
	#	%	#	%	#	%	#	%	
7.1 Deforestation; forest fires	55	76.4	35	81.4	26	89.7	116	80.6	1
7.2 Climate change; global warming	34	47.2	15	34.9	8	27.6	57	39.6	2
7.3 Industry; pollution	18	25.0	12	27.9	0	0	30	20.8	4
7.4 Poor water resources management by state	5	6.1	1	2.3	0	0	6	4.2	8
7.5 Poor water management by people/farmers	6	8.3	2	4.7	0	0	8	5.6	7
7.6 Rain doesn’t fall according to season	8	11.1	7	16.3	10	34.5	25	17.4	5
7.7 Caused by humans – individually or collectively	17	23.6	15	34.9	13	44.8	45	31.3	3
7.8 Due to decline or loss of natural resources	2	2.8	0	0	0	0	2	1.4	10
7.9 Lack of water storage sources (e.g. dams, reservoirs, etc)	1	1.4	1	2.3	3	10.3	5	3.5	9
7.10 Other	4	5.6	10	23.3	8	27.6	22	15.3	6

TABLE 11. Responses given to Question 11: “How strongly do you agree with the following statements?”

Statements	Responses (in %)	Strongly agree	Agree	Not sure	Slightly disagree	Strongly disagree
11.1 “Isaan is the driest region of Thailand”	Khon Kaen (n=121)	51.2	22.3	11.6	6.6	8.3
	Bangkok (n=107)	48.6	30.8	14.0	3.7	2.8
	Nam Song (n=109)	35.8	39.4	11.0	11.0	2.8
11.2 “Isaan deserves more budget for water resources development than other regions”	Khon Kaen (n=121)	71.9	20.7	5	0	2.5
	Bangkok (n=107)	43.9	38.3	14.0	1.9	1.9
	Nam Song (n=109)	71.6	21.1	5.5	1.8	0
11.3 “It would be a good idea to transfer water from the Mekong River to irrigate Isaan”	Khon Kaen (n=121)	40.5	22.3	19.0	9.9	8.3
	Bangkok (n=107)	41.1	17.8	22.4	13.1	5.6
	Nam Song (n=109)	49.1	20.4	18.5	10.2	1.9
11.4 “It would be a good idea to transfer water from rivers in Laos to irrigate Isaan”	Khon Kaen (n=121)	19.8	18.2	24.8	10.7	26.4
	Bangkok (n=107)	21.7	17.9	27.4	10.4	22.6
	Nam Song (n=109)	9.3	15.9	34.6	17.8	22.4
11.5 “There are already enough irrigation systems in Isaan already; what people need is better management of existing systems”	Khon Kaen (n=121)	57.9	20.7	5.8	5.8	9.9
	Bangkok (n=107)	54.7	25.5	12.3	4.7	2.8
	Nam Song (n=109)	55.0	26.6	8.3	8.3	1.8
11.6 “Powerful people in Thailand receive the most benefit from building more irrigation systems”	Khon Kaen (n=121)	27.3	22.3	15.7	14.0	20.7
	Bangkok (n=107)	29.9	26.2	30.6	14.0	9.3
	Nam Song (n=109)	18.7	31.8	35	12.1	1.9
11.7 “Politicians are able to win votes by policies that promise new irrigation systems to villagers”	Khon Kaen (n=121)	26.4	32.2	18.2	14.9	8.3
	Bangkok (n=107)	29.9	26.2	26.2	12.1	5.6
	Nam Song (n=109)	17.6	28.7	41.7	8.3	3.7
11.8 “The job of planning and managing water resources is more the duty of the government than the people”	Khon Kaen (n=121)	32.2	24.8	16.5	9.1	17.4
	Bangkok (n=107)	17.8	23.4	28.0	11.2	19.6
	Nam Song (n=109)	35.8	29.4	13.8	13.8	7.3

Appendix D Some organizational comparisons between the RID and the DWR

These two agencies represent two out of the three most important organizations involved with water resources development and management in Thailand, the third being the Electricity Generating Authority of Thailand (EGAT). However, although EGAT is a major dam builder and operator in particular river basins, its geographical scope and presence in river basins is not as widespread and pervasive as that of RID and DWR, who are seen to have a presence in every river basin in the country and profess universal hydraulic development missions. In the table below are some major institutional differences I perceive between the two agencies.

The Royal Irrigation Department, Ministry of Agriculture and Cooperatives	The Department of Water Resources, Ministry of Natural Resources and Environment
<ul style="list-style-type: none"> - Annual budget = 43.902 billion baht (2009) i.e. \$1.372 billion (@32B/\$) - No of staff – 32,425 - Long estbd organization dating back to 1903 with high public profile - Old school “hydraulic missionaries”, clinging on to old traditions and narratives – low adaptability, but high resilience to threats - Runs its own Irrigation College, as a technical and ideological training ground for staff - Definite engineering and supply-led bias to development - Moving away from just irrigation development focus to also develop flood protection and domestic water supply projects - Rhetorical commitment to participation and decentralization (e.g. PIM/IMT) - Only real reform seen to date has been non-replacement of retiring staff - Seen as aloof from other state agencies, with little transparency in project planning or implementation - Poor record on public participation and perhaps less public accountability nowadays than in 70s & 80s when more open to scrutiny through foreign donor reports - Tends to deal with narrow range of stakeholders in project planning and implementation. More parochial. - Massive stock inventory of dams/projects, but better record of O&M for large-scale projects. Trying to 	<ul style="list-style-type: none"> - Annual budget = 2.584 billion baht (2008) i.e. \$81 million (@32B/\$) - No of staff = 2,543 - Newly estbd (2002) with short track record and relatively low public profile - New school “hydraulic missionaries” – more willing to adopt new international discourses around water resources management - Drew staff from a variety of other agencies, so more pluralistic in worldview than RID - Inherited many old school engineers and technocrats, used to old engineering paradigm, but has tried to forge a managerial paradigm in parallel, by being more multi-disciplinary than RID - Rhetorical commitment to IWRM, participation and decentralization (e.g. RBOs) - DWR was product of reform process - Slightly better record of public accountability and transparency than RID, evident in annual report - Through RBOs, has developed links with a wider range of domestic and international stakeholders than RID. - Links with MRC via TNMC, giving it a wider international outlook and practice, and perhaps more open to change - Poor record of O&M practice post-project construction, preferring to transfer responsibility to local users - Relatively accessible to outsiders, although still functions as “black box” in many aspects

<p>shift responsibility for small/medium projects onto local govt / TAO</p> <ul style="list-style-type: none"> - Relatively inaccessible agency to outsiders (black box agency) - Planning a pan-Isaan irrigation mega-project, involving diversion from Mekong-Loei-Chi-Mun, with roots back to Pa Mong Dam - Has more internal experience and capacity to develop a range of irrigation infrastructure technologies and links with extension agencies in MoAC - Close royal associations and linkages, forged over long period E.g. King's portrait and narratives highly visible internally. Uses royal endorsement and protection to accelerate project development (esp. Royally-initiated Projects) - Profits from symbolic value of royal support and infrastructure named after members of monarchy - Close links to powerful politicians in its core regions (e.g. Banharn Silpa-Archa in Chao Phraya delta) - Extra-governmental status e.g. in provincial hierarchy - Budgets primarily spent on developing new infrastructure projects - 	<ul style="list-style-type: none"> - Has current plans to create a pan-Isaan irrigation mega-project via Nam Ngum – Huay Luang transfer, and other locations transferring water from Laos to Northeast - Has little internal capacity in developing irrigation systems or providing agriculture support or extension - Has little control or leverage over activities of RID, which means it cannot fulfill its mandate on water resources planning and development. - No overt links to monarchy, but adopts king's rhetoric in own narratives - Close link to several politicians, formerly linked to TRT (e.g. Suwit Khunkitti) - Seems to be moving ever closer to fulfilling role as just another hydraulic infrastructure constructor with less finances and emphasis being placed on resource management
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Sources: (Molle, 2007b; Department of Water Resources, 2008; Royal Irrigation Department, 2009)

Appendix E Sakon Nakhon Province irrigation projects under control of RID in two Districts in 2010

(Source: Data provided by RID Provincial Office, Sakon Nakhon. April 2010)

Name of Reservoir / Project	Type of Irrigation (G=Gravity, P=Pumped)	Village	Sub-District	District	Storage Volume (MCM)	Command Area (rai)	Estimated planted area (2009-10 dry season)	Visited (Y/N)
Huay Nam Bor	G	Baan Pracha Suksan	Kamin	Muang	2.20	3,000	0	Y
Huay Sai Kamin	G	Baan Huay Sai	Pang Khwang	"	2.40	4,000	400	Y
Huay Sai 1	G	Baan Nong Pla Duk	"	"	2.10	6,600	0	Y
Huay Sai 2	G	Baan Dong Yaw	"	"	2.10	3,800	0	Y
Huay Sai 3	G	Baan Non Sawan	"	"	0.21	700	0	Y
Huay Wien Phrai	G	Baan Laad Grayer	Huay Yang	"	0.33	670	?	N
Baan Don Kaen	P	Baan Don Kaen	Nong Laad	"	n/a	700	?	N
Baan Tha Muang	P	Baan Tha Muang	"	"	n/a	800	0	N
Huay Hin Daek	G	Baan Hin Daek	Rai	Phanna Nikhom	1.50	3,200	0	N
Phu Pek	G	Baan Phu Pek	Naa Hua Bor	"	2.70	600	0	Y
Huay Sua Yan	G	Baan Phu Pek	Naa Hua Bor	"	0.34	400	0	Y
Huay Wang Rua	G	Baan Naa Saow Nan	"	"	0.90	2,500	0	Y
Huay Saeng Noi	G	Baan Cherng Chum	Cherng Chum	"	0.27	1,200	0	N
Huay Baan Haang	G	Baan Kham Kha	Rai	"	0.19	500	0	Y
Huay Wang Tham	G	Baan Non Udom	"	"	4.00	6,000	167	N
Huay Khok	G	Baan Pak Kham Phu	Naa Nai	"	0.21	640	0	N
Huay Hin Laad	G	Baan Naa Nai	"	"	0.86	4,000	0	N
Huay Suan Baan	G	Baan Pak Kham Phu	"	"	1.10	1,800	0	N
Huay Buak	G	Ban Oon Dong	"	"	0.44	1,500	0	N
Huay Peung	G	Baan Nong Pue	"	"	0.63	1,000	0	N
Kham Pramong	G	Ban Kham Pramong	Sawang	"	0.40	300	0	N
Baan Naa Kham	G	Baan Naa Kham	"	"	0.20	150	0	N
Baan Tha Song Korn	P	Baan Tha Song Khorn	Ba Hee	"	n/a	600	Some	Y
Baan Naa Dtaa Glang	P	Baan Naa Dtaa Glang	"	"	n/a	700	Some	Y
Baan Sawang	P	Baan Sawang	Sawang	"	n/a	1,600	?	N
Baan Naa Sorn	P	Baan Naa Sorn	"	"	n/a	800	?	N
Baan Don Gloy	P	Baan Don Gloy	"	"	n/a	1,500	?	N
				TOTALS		49,260	567	

Acronyms

ADB	Asian Development Bank
ALRO	Agricultural Land Reform Office
ARD	Accelerated Rural Development
DEDP	Department of Energy Development And Promotion
DWR	Department of Water Resources
EGAT	Electricity Generating Authority of Thailand
FAO	Food and Agriculture Organization of the United Nations
IWMI	International Water Management Institute
IWRM	Integrated Water Resources Management
KCM	Khong-Chi-Mun
LNOIP	Lam Nam Oon Irrigation Project
MoAC	Ministry of Agriculture and Cooperatives
MoNRE	Ministry of Natural Resources and Environment
MP	Member of Parliament
NE	Northeast
NEA	National Energy Agency
NEB	National Environment Board
O & M	Operation and Maintenance
OEPP	Office of Environmental Policy and Planning
ONEP	Office of Natural Resources and Environmental Policy and Planning
PAO	Provincial Administration Organization
RBO	River Basin Organization
RID	Royal Irrigation Department
TAO	Tambon (Sub-district) Administration Organization
USAID	United States Agency for International Development
USBR	United States Bureau of Reclamation

Glossary of Thai Terms

Thai transliteration	Thai	English
<i>amnaat</i>	อำนาจ	Power, authority
<i>Baan</i>	บ้าน	A village
<i>baaray</i>	บาราย	Khmer name for floodplain storage reservoirs
<i>chao baan</i>	ชาวบ้าน	Villager
<i>chao naa</i>	ชาวนา	Rice farmer
<i>chart</i>	ชาติ	Nation
<i>chonla-prathaan</i>	ชลประทาน	Official irrigation or, more literally, “water gifted from the King”
<i>deva-raajaa</i>	เทวราชา	A god-king in the Hindu-Brahman cosmological tradition
<i>dhamma-raajaa</i>	ธรรมราชา	A selfless, enlightened ruler in the Buddhist cosmological tradition
<i>fai maew</i>	ฝายแม้ว	Small check-dams promoted nationwide by the king, based on traditional weirs used by highlanders in the North
<i>gamnan</i>	กำนัน	Sub-district chief
<i>gaan pattanaa</i>	การพัฒนา	Development
<i>gaem ling</i>	แก้มลิง	“Monkey Cheeks” – a simple on-floodplain water storage reservoir; concept accredited to the king
<i>grom chonla-prathaan</i>	กรมชลประทาน	Royal Irrigation Department
<i>grom sapayaagon nam</i>	กรมทรัพยากรน้ำ	Department of Water Resources
<i>haeng laeng</i>	แห้งแล้ง	Arid (e.g. weather, soil, etc)
<i>Isaan</i>	อีสาน	Northeast Thailand – a distinct region geographically and culturally
<i>ittiphon</i>	อิทธิพล	Influence
<i>jao pho</i>	เจ้าพ่อ	Godfather; a man with great power and influence, often based in provincial capitals
<i>kasetagon tamadaa</i>	เกษตรกรธรรมดา	Ordinary farmer
<i>Khana Ongkhamontri Thai</i>	คณะองคมนตรีไทย	Privy Council of Thailand
<i>khao nieow</i>	ข้าวเหนียว	Glutinous or sticky rice
<i>khao jao</i>	ข้าวเจ้า	Plain rice
<i>khaaraatchagan</i>	ข้าราชการ	Government officials
<i>khrong-gan an-nuang maa jaak pracha-damree</i>	โครงการอันเนื่องมาจากพระราชดำริ	Royally-Initiated Projects
<i>khrong-gan Isaan Khieow</i>	โครงการอีสานเขียว	Green Isaan Project
<i>khrong-gan kut lawk</i>	โครงการขุดลอก	Dredging project
<i>khrong-gan Thai Kaem Kaeng</i>	โครงการไทยเข้มแข็ง	The Strong Thailand Project

<i>khlong</i>	คลอง	Canal
<i>khlong sai gai</i>	คลองไส้ไก่	Tertiary or small distributor canal
<i>khwaam jaroen</i>	ความเจริญ	Prosperity, material progress, advanced technologically
<i>khwaam ben Thai</i>	ความเป็นไทย	“Thainess”
<i>mahaa anajak Thai</i>	มหาอาณาจักรไทย	Greater Thai empire
<i>muang fai</i>	เหมืองฝาย	Traditional irrigation systems in Northern Thailand
<i>naa laeng</i>	หน้าแล้ง	Dry season
<i>naa ron</i>	หน้าร้อน	Hot season
<i>naa fon</i>	หน้าฝน	Rainy season
<i>naa prang</i>	นาปรัง	Dry season rice cultivation
<i>naa bee</i>	นาปี	Wet season rice cultivation
<i>naa saeng</i>	นาแซง	Indigenous flood recession rice cultivation in Northeast
<i>nam prathai jaak nai luang</i>	น้ำพระทัยจากในหลวง	Generosity from the king
<i>nam tuam</i>	น้ำท่วม	Flood
<i>nong</i>	น้อง	Younger brother/sister
<i>Ongkan Borihaan Suan Tambon or Or Bor Tor [acronym]</i>	องค์การบริหารส่วนตำบล	Tambon Administration Organization (TAO)
<i>paasaa</i>	ภาษา	Language
<i>paa boong paa thaam</i>	ป่าบุง ป่าทาม	A local term for seasonally flooded wetlands forest in Northeast
<i>paa thuan</i>	ป่าเถื่อน	Jungle
<i>pai laeng</i>	ภัยแล้ง	Drought natural disaster
<i>pattiwat</i>	ปฏิวัติ	To revolt or drastically reform
<i>phak phuak</i>	พรรคพวก	Circle of friends; members of a patron-client network
<i>pho khun</i>	พ่อขุน	Father-like figure
<i>pho-khun uppatham baeb phadet-gaan</i>	พ่อขุนอุปถัมภ์แบบเผด็จการ	Paternalistic despot
<i>pho yai</i>	พ่อใหญ่	Honorific term for a village elder
<i>phramahaagasat</i>	พระมหากษัตริย์	King or monarch
<i>phu yai baan</i>	ผู้ใหญ่บ้าน	Village headperson
<i>prachaachon</i>	ประชาชน	The people or the public
<i>phrachao chiwit</i>	พระเจ้าชีวิต	Lord of life
<i>phrachao paendin</i>	พระเจ้าแผ่นดิน	Lord of the land
<i>pai</i>	พี่	Elder brother/sister
<i>rai</i>	ไร่	Unit of land area most commonly used in Thailand, equivalent to 1,600 m ²

<i>rattabaan</i>	รัฐบาล	The government
<i>sakdinaa</i>	ศักดินา	Societal status ranking system during era of absolute monarchy
<i>saatsanaa</i>	ศาสนา	Religion
<i>sethagit phor piang</i>	เศรษฐกิจพอเพียง	“Sufficiency Economy” philosophy
<i>siwilai</i>	ศิวิไลซ์	Civilized, culturally refined
<i>tambon</i>	ตำบล	A sub-district administrative division
<i>thod nam</i>	ท่อน้ำ	A more traditional and neutral term for irrigation, little heard nowadays
<i>udom-gaan</i>	อุดมการณ์	Political ideology
<i>utokapai</i>	อุทกภัย	Flood disaster
<i>wattanathaam chumchon</i>	วัฒนธรรมชุมชน	Community culture

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